AMERICAN GAS ASSOCIATION MONTHLY

July 1928

Volume X Number 7

Economic Aspects of Laboratory Seal Defined
By BERNARD J. MULLANEY

The Japanese Gas Industry Marches Forward
By Y. TOYOSHIMA

A.G.A. Convention Will Be Real Success

Research Will Lead to Forging Developments
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Facing the Domestic Cooking Load Problem
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Nominating Committee Reports for 1928-29

Aspects of Public Utility Merchandising
By W. M. WALSH

Some 1927 Statistics on the Manufactured Gas Industry
By PAUL RYAN

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10th Annual Convention of the A. G. A.

Atlantic City, N. J.
October 8 to 12

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For statements and opinions contained in papers and discussions appearing herein, the Association does not hold itself responsible.

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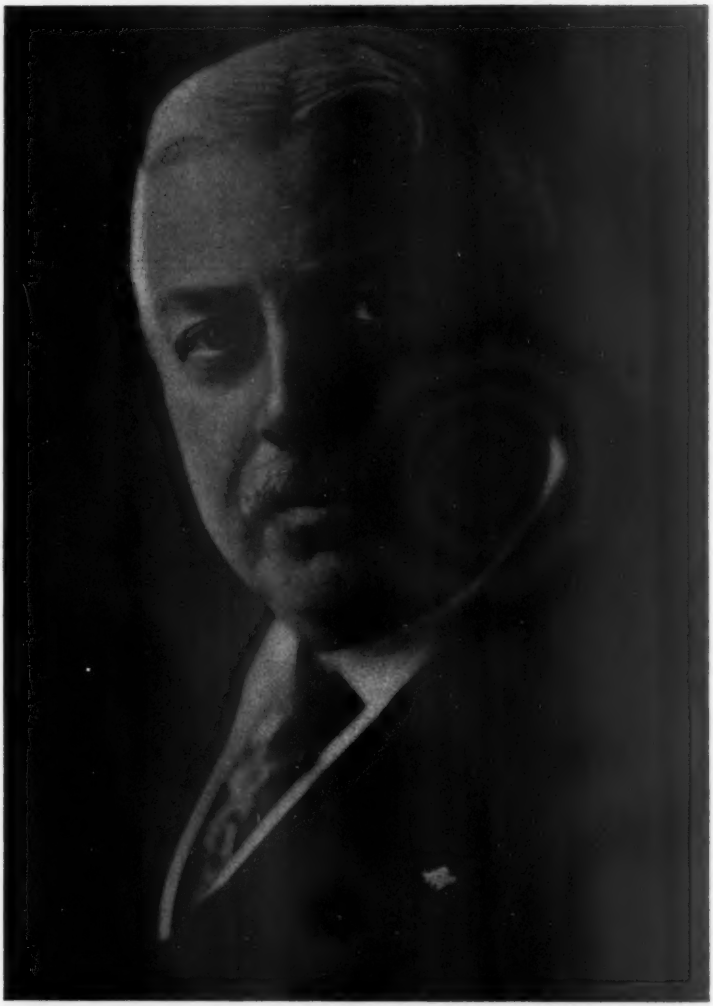
Our Own Who's Who



XXXVIII

Clare N. Stannard

BORN Nov. 13, 1869, in Friendship, N. Y. Attended public schools of Hornellville, and high school in Binghamton, N. Y. Entered Susquehanna Valley Bank of Binghamton in the capacity of messenger and bookkeeper. On January 1, 1890, he entered the employ of the Binghamton Gas & Electric Co. Spent seven years in technical training in gas and electric departments, acquiring general and specific knowledge of gas and electric engineering. For some time was acting superintendent of street railway owned and operated by the Binghamton company. In 1896 moved to Asheville, N. C., and in 1897 removed to Denver, where he obtained employment with the Denver Tramway Co. in the master mechanic department, later being transferred to auditing department. On March 1, 1898, became associated with the Denver Consolidated Electric Co. in the capacity of collector, but advanced from that station to assistant cashier. Upon merger of Denver Consolidated Electric Co. and Denver Consolidated Gas Co. into Denver Gas & Electric Co., he was appointed cashier, and was gradually moved from this station to the position of general commercial manager. Added to the duties of this situation was that of secretary in 1906. In March, 1922 he was appointed to the position of vice-president and general manager of the Denver Gas & Electric Light Co. In 1923, upon the merger of the Western Colorado Power Co. into the Denver Gas & Electric Light Company, the Public Service Company of Colorado was formed and in 1924 the Colorado Power Co. came into the properties, the consolidation of these various companies bringing some 125 cities, towns and communities in Colorado and Wyoming under Mr. Stannard's direct supervision. One of the outstanding accomplishments in the gas industry, brought about under Mr. Stannard's direction, was the first adoption of selective standards. Is past-president of Denver Rotary Club, director of Denver Tourist Bureau, director of Y. M. C. A.

AMERICAN GAS ASSOCIATION MONTHLY

Vol. X JULY, 1928 No. 7

Tenth A. G. A. Convention Will Be Success

Advance Information Brings Out Importance of Meeting at Atlantic City, October 8-12

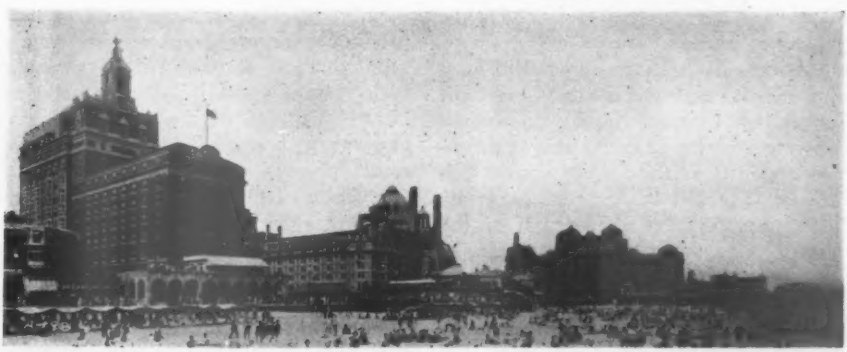
WHILE is it too early to divulge details of the tenth annual convention of the American Gas Association, at Atlantic City, N. J., October 8-12, it is apparent that it will be the biggest and most important meeting ever held by the gas industry.

Present indications point to a fitting tenth anniversary convention. The general program committee has already had one meeting, and is at present working out a valuable and interesting array of addresses for the General Sessions. The exhibition will be the largest ever devoted to the gas industry, as is announced elsewhere in this issue. The programs of the sectional and departmental meetings are being arranged by competent committees, and there is every evidence that the 1928 A. G. A. convention will be one that no one can afford to miss.

Entertainment of the usual high caliber will be furnished and Atlantic City's attractions will be at their best in October.

More detailed announcements of the convention will be given in the August issue of the MONTHLY.

Of particular interest to all who intend to be at Atlantic City for the convention is the announcement that adequate meeting rooms will be provided for every gathering. This year no section or department will meet in a room that does not have all the qualifications of a good meeting room. The rooms will be sufficiently large, well-ventilated, and with splendid acoustic properties.



Atlantic City, October 8-12—the place and time of the 10th A. G. A. Convention

This is the official sticker of the Tenth Annual A. G. A. Convention. Quantity lots of this sticker, printed in attractive colors, will be supplied free of charge upon request to A. G. A Headquarters

Of interest particularly to men engaged in industrial gas utilization is the announcement that the annual convention of the American Society for Steel Treating will be held at Philadelphia, Pa., the same week the A. G. A. meets in Atlantic City. R. G. Guthrie, of The Peoples Gas Light and Coke Co., Chicago, Ill., will present a paper on gas at this meeting on Friday, October 12. This has been so arranged to give gas men the opportunity to go to Philadelphia to hear Mr. Guthrie and to see the Steel Treaters' show, at which the A. G. A. will have a large exhibit.

While Atlantic City is a favorite place among gas men, a few facts about the city are of interest.

Partisans of Atlantic City affirm most emphatically that she is the Queen of Convention Cities. Among the many factors combining to create this tremendous popularity is the facility with which Atlantic City can be reached, either by rail or motor, from any section of the country. One hour from Philadelphia, three hours from New York, four and one-half hours from Washington, ten hours from Boston, ten hours from Pittsburgh, nineteen hours from Chicago, and twenty-four hours from St. Louis. It is readily apparent that Atlantic City is very fortunately located with relation to the great centers of population.

Atlantic City's hotels meet the most exacting demands from the standpoint of comfort, elegance and grace. Architecturally beautiful, many of the hotels rise massively and majestically from the ocean's edge and provide a fitting setting for the kaleidoscopic panorama which stretches before them—distant yachts with full-blown sails silhouetted against an azure sky, a variety of lively, seasonal beach activities along the fringe of tumbling surf, and the always sparkling life of the Boardwalk—a sight that charms and fascinates even the seasoned traveler.

While not as luxurious and elegant as the larger hotels, the moderately priced hostelries furnish accommodations of a superior excellence and convenience.

Unique among world institutions, the Boardwalk is perhaps most adequately described to those who have never seen it by likening it to the deck of an immense ocean liner—a ship miles in length. To many, a stroll on the justly famous Boardwalk, is, in itself, a most fascinating recreation and diversion.

With Atlantic City's many and varied attractions bidding for attention, the visitor is perplexed not so much with "What shall we do?" as with "Which shall we do?" For there is a diversity and an abundance of entertainment that beggars description. The latest and best in stage productions, moving pictures and vaudeville, concerts by the world's most famous bands, vocal and instrumental recitals by artists of renown, dancing in the many beautiful ballrooms to the music of well-known dance orchestras, —a choice of pleasant, wholesome entertainment.

It is a city that completely meets the requirements of conventions. Ample and excellent hotel accommodations, a variety of entertainment, and above all, an atmosphere conducive to the successful conduct of convention deliberations.

Nominating Committee Reports for 1928-29

O. H. Fogg and B. J. Mullaney Will Be President and Vice-President, Respectively, of A. G. A.

O. H. Fogg

B. J. Mullaney

TO members of the American Gas Association: In compliance with Section 2 of Article II of the By-Laws of the American Gas Association, announcement is hereby made to the membership of the following report of the General Nominating Committee which will be presented to the Annual Convention in Atlantic City, N. J., in October, 1928:

For President—Oscar H. Fogg, vice-president, Consolidated Gas Co. of New York, N. Y.

For Vice-president—Bernard J. Mullaney, vice-president, The Peoples Gas Light and Coke Co., Chicago, Ill.

For Treasurer—Clifford E. Paige, vice-president, The Brooklyn Union Gas Co., Brooklyn, N. Y.

For Directors:

R. B. Brown, Milwaukee Gas Light Co., Milwaukee, Wis.

Henry L. Doherty, H. L. Doherty & Co., New York, N. Y.

W. W. Freeman, Columbia Gas & Electric Corp., New York, N. Y.

R. C. Hoffman, Standard Gas Equipment Corp., Baltimore, Md.

Samuel Insull, Jr., Midland Utilities Co., Chicago, Ill.

J. B. Klumpp, The United Gas Improvement Co., Philadelphia, Pa.

F. A. Lemke, Humphrey Co., Kalamazoo, Mich.

A. B. Macbeth, Southern California Gas Co., Los Angeles, Calif.

Chas. R. Pritchard, Lynn Gas & Electric Co., Lynn, Mass.

Respectively submitted,

H. H. GANSER, *Chairman*,

J. D. CREVELING A. E. MERCHANT
E. L. HALL J. ARNOLD NORCROSS
W. L. SMITH

The following are nominated to serve as Section officers for the year 1928-1929:

Accounting Section: Chairman—F. H. Patterson, Rochester Gas & Electric Corp., Rochester, N. Y.; Vice-chairman—J. L. Conover, Public Service Electric & Gas Co., Newark, N. J.

Commercial Section: Chairman—G. M. Karshner, Consolidated Gas Company of N. Y., New York, N. Y.; Vice-chairman—G. E. Whitwell, Equitable Gas Co., Pittsburgh, Pa.

Industrial Gas Section: Chairman—J. P. Leinroth, Public Service Electric & Gas Co., Newark, N. J.; Vice-chairman—C. C. Krausse, Consolidated Gas Electric Light and Power Co., Baltimore, Md.

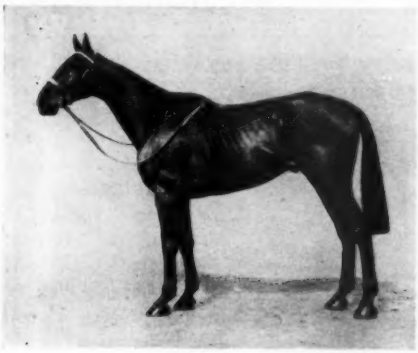
Publicity and Advertising Section: Chairman—E. Frank Gardiner, Midland Utilities Co. Chicago, Ill.; Vice-chairman—James M. Bennett, Philadelphia Electric Co., Philadelphia, Pa.

Technical Section: Chairman—H. E. Bates, The Peoples Gas Light & Coke Co., Chicago, Ill.; Vice-chairman—B. V. Pfeiffer, The United Gas Improvement Co., Philadelphia, Pa.

Baltimore Year Book

THE title of the 1927 Year Book of the Consolidated Gas Electric Light and Power Company is "Giving More: Charging Less: Growing Faster."

The 1928 volume is based on the recent rate reduction of the company. Developments in every phase of the company's progress are given.



© W. W. Rouch

Billy Barton, famous jumper owned by Howard Bruce, chairman of the Board, Bartlett Hayward Co.

Arthur G. Glasgow Receives Two Honors

ARTHUR G. GLASGOW, of Humphreys and Glasgow, Ltd., London, England, was honored recently when Stevens Institute conferred on him the high and seldom bestowed degree of Doctor of Engineering.

This was done at the 1928 Commencement of the Institute, when 72 students were graduated.

The Franklin Institute, of Philadelphia, presented the Walton Clark medal to Mr. Glasgow, in recognition of his work in the gas industry, at special exercises held in Philadelphia, Pa., on May 16.

Mr. Glasgow received his early training in the gas industry as an employee of The United Gas Improvement Co.

The Peoples Year Book

THE 1928 Year Book of the Peoples Gas Light & Coke Company is a story of the history and operations of the company in 1927. A message to the stockholders from Samuel Insull, president, leads the account of progress made in every phase of the company's activity.

Industrial gas progress is related as well as the growth of the use of gas in hotels and restaurants. Another chapter deals with the work of the American Gas Association Testing Laboratory at Cleveland.

The new rates which were put into effect recently by the company are discussed in detail and mention is made that the old "refund" litigation is ended.

Program Announced for Course at Brooklyn Poly

THE program for the second course on "Elements of Gas Engineering" at Polytechnic Institute, Brooklyn, New York, has been announced by E. F. Church, Jr., professor of mechanical engineering and head of the department at the Institute. The course will start September 27 and will continue throughout the scholastic year.

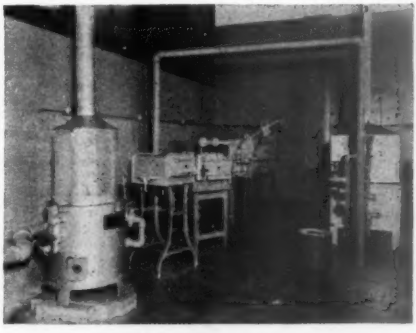
The course will consist of twenty-six lectures, five works inspection trips, and twenty laboratory sessions dealing with the principles underlying the manufacture, distribution and utilization of manufactured gas, and with their applications.

Three concluding lectures will deal with general topics of importance in the gas industry including accounting, future trends, and service relations with the public.

The course is open only to high school graduates and to those who have had the equivalent of good high school courses in physics, chemistry, and mathematics. The student's rating will be dependent on attendance, problems solved, laboratory notes and reports and grades received on tests held at intervals throughout the year.

The instruction in the course will be given by members of the teaching staff of the Polytechnic Institute, assisted by specialists chosen from the gas industries, under the direction of Professor Church. The hours are as follows: Lectures, Thursdays, 6:30-7:30 P.M., beginning September 27; Laboratory Sessions (one per week required).

Among those scheduled to take part in the Course are A. G. King, American Gas Association; A. M. Apmann, Consolidated Gas Co. of New York; and the following of The Brooklyn Union Gas Company: C. E. Paige, E. C. Uhlig, F. C. Weber, T. B. J. Merkt, and T. P. Payne.



Laboratory scene at Brooklyn Poly

Economic Aspects of Laboratory Seal Defined

In Report of Special Committee Made Before Spring Conference of Executive Board and Advisory Council

By BERNARD J. MULLANEY

Chairman, Committee on Economic Aspects of Blue Star Seal; Vice-President, A. G. A.

A SPECIAL Committee on Economic Aspects of the Blue Star Seal was appointed by President Fogg, at the February meeting of the A. G. A. Executive Board, in response to discussions within the industry in relation to the work of the Testing Laboratory, the Blue Star Seal as the visible mark of laboratory approval, and the commercial exploitation of the Blue Star Seal as a merchandising factor.

In appointing this committee, President Fogg undertook to make its personnel represent the several branches of the gas industry most vitally interested, as follows:

The Manufacturers' Section, by its chairman and secretary, H. Leigh Whitelaw and C. W. Berghorn. The Commercial Section, by its chairman and secretary, and the field representative of its Blue Star Plan, J. J. Burns, J. W. West, Jr., and A. E. Higgins. The Publicity and Advertising Section, by its secretary, Charles W. Person. The A. G. A. Testing Laboratory by its director, R. M. Conner. The American Gas Association at large, by a member of its Executive Board, who was designated as chairman.

Your Committee has tried faithfully to develop a composite of the best thought in the industry on two main questions, as follows:

1. What effect has the Testing Laboratory's operation had upon the quality of domestic gas-burning appliances being sold today?

2. What result has the use of the Laboratory's seal of approval had upon the sales of domestic gas-burning appliances for which it is now available?

On these questions, the considered opinions of both gas appliance manufacturers, who are on the Laboratory's approval list, and of the gas company executives, particularly those concerned with the merchandising of appliances, have been sought by letter, by questionnaire, and by personal interview.

On April 12 your Committee met, with President Fogg presiding on account of the unavoidable absence of the committee chairman, and the results of the canvass

---

IMPORTANT recommendations of interest to the entire gas industry were made in the report of the Committee on Economic Aspects of the Blue Star Seal, which was presented by B. J. Mullaney, chairman, at the annual Spring Conference of the Executive Board and Advisory Council of the American Gas Association, at Atlantic City, N. J., June 1-2.

Immediately after Mr. Mullaney delivered the report, the Conference passed the following resolution:

"Moved, that the Conference approves the report of the Committee on Economic Aspects of the Blue Star Seal, as presented by Mr. Mullaney, and suggests that the Executive Board take the necessary steps to put its recommendation in full effect, including a standardized authorized description of the meaning of the Blue Star Seal."

The attention of all members of the A. G. A. is directed to the following sentence in Mr. Mullaney's report: "In other words, a gas appliance that cannot pass the Laboratory tests, and therefore does not bear the Blue Star Seal, is not fit to be sold or used, and all practicable means should be employed to prevent the sale of it."—Editor.

were discussed at length, a representative delegation of appliance manufacturers participating in the discussion. With the viewpoints and arguments thus disclosed as a basis, your Committee continued its efforts.

Considerable divergence of opinion, especially among appliance manufacturers, and to a less degree among gas companies, has been disclosed with reference to the effect of the Laboratory's work upon appliance sales.

Consideration of these differences of opinion has raised another contention, namely: That the work of the Testing Laboratory has had undesirable levelling effects upon the appliance business, to the advantage of manufacturers of low-grade appliances, and consequently to the disadvantage of manufacturers of high-grade appliances. Undoubtedly, the redesigning and rebuilding of low-grade appliances to conform to Laboratory standards has increased the competition in a field already overcrowded. But this would seem to have been unavoidable, if any standards at all were to be set up and applied.

These effects had been accentuated, the argument ran, by description advertisement and miscellaneous exploitation by the Blue Star Seal as the mark of *quality*. The less scrupulous manufacturers and merchandisers, it was said, were being assisted in misrepresenting that any "Blue Star" gas range, for example, was as good as any other "Blue Star" range, except for non-essentials which added nothing to the durability or efficiency of the higher priced range.

This discussion rose until it all but overshadowed the primary questions before your Committee, and made us face new ones. Speaking generally, these new questions may be summarized as follows:

A. Just what is the meaning of the Blue Star Seal on a gas appliance—how much or how little does it mean—as the visible sign of A. G. A. Laboratory approval?

B. To what extent, if any, should the Blue Star Seal be advertised or otherwise commercially exploited as a factor in the merchandising of gas appliances?

The acuteness of the situation thus developed may be illustrated by citing a proposal, made seriously and with considerable vigor, to the effect that the Blue Star Seal, or any other mark signifying Laboratory approval of an appliance, should be abolished and that evidence of Laboratory approval should be confined to a certificate given by the Laboratory to the manufacturer.

To get a correct perspective on both the primary and the collateral questions at issue, your Committee deems it expedient to review, as briefly as possible, certain salient points in relation to the Testing Laboratory itself and the significance of the Blue Star Seal on an appliance as a mark of laboratory approval.

TO PROMOTE SAFETY

It is scarcely necessary to remind ourselves in detail that the Testing Laboratory was established to promote safety in gas-burning appliances for the protection of the public, or to remind ourselves of the reason why of it. Having been established, the next consideration naturally would be—as it was—ways and means of making the Laboratory effective in full measure for the good of the gas industry.

There are only two obvious ways of making Laboratory test and approval fully effective, neither of which excludes the other. One way is to give legal effect to the Laboratory tests, which involves statutory enactments or city ordinances—a difficult and a long road to results, yet one that is already being developed to a considerable extent. The other way is to make appliance buyers want approved appliances and at the same time make it easy for them to select the approved and reject the unapproved.

Either way, some visible mark of Laboratory approval would seem to be a necessity. Without it, the appliance buyer cannot be expected to distinguish between approved and unapproved ap-

pliances. Once in a blue moon some buyer might go the length of asking the seller to prove that an appliance complied with A. G. A. standards and requirements. But no conceivable amount of advertising or other sales effort would make this practice general. So, too, in only slightly less degree, the effect of an approval mark or lack of it upon inspectors charged with enforcing ordinance or statutory requirements, if A. G. A. specifications should be given legal effect in any considerable number of localities. Regardless of theory, inspectors, in a great majority of instances, would not examine an appliance, detail by detail, for compliance with legal requirements. Lack of distinguishing emblem would lead to carelessness of inspection amounting to no inspection. On the other hand, an emblem signifying compliance with the requirements would quickly be accepted and would correspondingly facilitate inspection. All these considerations were doubtless in mind, since they are so obvious, when the Blue Star Seal was adopted as a mark of Laboratory approval.

THE SEAL IS NOT ONE OF QUALITY

Without a doubt, there has been undue advertisement and exploitation of the Seal as a mark of *quality*, with disappointing results. In analogous circumstances similar mistakes have been made in other industries. The Laboratory was a new proposition. Commendable enthusiasm for its main purpose easily threw collateral considerations out of focus, and the Seal was consequently represented, by implication at least, as something that it was not.

Some gas companies, with price as the controlling factor in their merchandising, and some manufacturers, seeking only to expand their business, fell into this error. But individual mistakes, in relation to one detail of a constructive and admittedly necessary program for the entire industry, are scarcely a reason for abandoning the program.

Quality is an elastic term. But the most elastic meaning of it, as commercially used, never was, and never was intended to be implied by laboratory approval of gas appliances.

Testing Laboratory standards are intended to assure safety first of all, and secondarily a degree of durability and efficiency inseparable from adequate assurance of safety—nothing more. They represent the minimum of basic requirements for usable gas appliances, and the Blue Star Seal is only the visible evidence of compliance with those basic requirements. *In other words, a gas appliance that cannot pass the Laboratory tests, and therefore does not bear the Seal, is not fit to be sold or used, and all practicable means should be employed to prevent the sale of it.*

Your Committee believes that employment and exploitation of the Seal as a merchandising factor has been a mistake. At the same time, it believes the unfavorable effects of this have been somewhat over-emphasized. It may easily be that effects, attributed to Laboratory and Blue Star causes, have really been effects of business conditions, general or special, to which Laboratory standards and the Seal are in no way related.

The application of Laboratory standards has had unmistakably an *upward* levelling effect upon the lower strata of gas appliances, in that it has tended to eliminate the unsafe and generally unworthy appliances. But a correspondingly downward levelling effect upon high-grade appliances does not necessarily follow.

The Laboratory standards, as represented by the Blue Star Seal, cover only basic requirements. Above and beyond these requirements, the manufacturer has all conceivable latitude for his manufacturing skill and merchandising ingenuity in establishing the *quality* of his product—all conceivable latitude for convincing buyers that his range, for example, is of better design for convenience and service, will last longer, and will cook better and

faster, as well as look better, than that of his competitor.

The Laboratory standards and the Seal have nothing whatsoever to do with these elements of superior quality. Putting these elements into appliances, and convincing prospective buyers of their existence, are distinctly manufacturing and merchandising problems which each manufacturer and merchandiser must solve for himself.

RECOMMENDED THAT:

Therefore the conclusions and recommendations of your Committee are as follows:

The Testing Laboratory is an asset of inestimable value to the gas industry in that it is developing and establishing basic standards of gas appliance performance, the effect of which must inevitably be of benefit to the entire gas industry, including appliance manufacturers of conscientious and progressive intent. These standards may not yet be all that they should be. But they appear to be as high as they could well be at this stage of the Laboratory's development. It has not been practicable to establish ideal standards in one jump.

If there is to be a testing laboratory—and upon this there is no difference of opinion—its work cannot be fully effective unless the appliances that pass its tests bear some easily distinguishable mark signifying Laboratory approval. Once adopted and established, such a mark belongs to the entire industry, and to the gas-using public it becomes the industry's assurance of good faith. Both manufacturers and merchandisers of appliances should accept this mark of Laboratory approval for exactly what it is, no more and no less—a guaranty of compliance with basic national standards of safety—and should exploit its significance accordingly, until the appliance-buying public undertakes the exact significance of it.

To that end, your Committee recommends that the headquarters staff of the American Gas Association be directed to take such steps as may be necessary to enlist all member companies in this educative effort. Official circularization, the A. G. A. MONTHLY, and the advertising service conducted by the Publicity and Advertising Section are among the agencies which may be so employed.

A first step might be definite and intensive instruction of gas company personnel and allied trades in the exact significance of the emblem of Laboratory approval. When gas company and allied trade personnel all over the country becomes understandingly conscious of the Seal and its significance, the appliance-buying public will not be long in becoming similarly conscious, provided the education of personnel goes hand in hand with advertising and salesmanship interpretation.

(Continued on page 434)

The Brooklyn Union Gas Co., Brooklyn, N. Y., won a banner for the best float in the recent clean-up week parade. The float shows the skyline of Brooklyn with a gas holder in the center. It was designed and constructed by George E. Harris, of the display department of the company

The Japanese Gas Industry Marches Forward

Facts and Figures and Official Greetings from a Gas Man Visiting the United States

By Y. TOYOSHIMA
Chief Engineer, Hiroshima Gas and Tramway Co., Hiroshima, Japan

Mr. Toyoshima

IT is my privilege to report to the gas industry of the United States that the industry in Japan is in a prosperous and healthy condition. The business is growing and we are meeting all our problems in a satisfactory manner. The purpose of this article is to acquaint the American gas industry, through the A. G. A. MONTHLY, of the status of the gas industry in my country.

There are at present 80 companies, of which 14 are combination gas and electric companies, and 64 are gas companies. The total capitalization of the 80 companies is 828,777,690 yen ($414,388,845), while the capitalization of the gas industry alone is 150,914,600 yen ($75,457,300). Gas and electric receipts for 1927 totaled 254,345,966 yen ($127,172,983), and expenditures were 161,719,447 yen. The receipts of the gas industry for the same period were 66,634,765 yen ($33,317,382), expenditures were 41,459,383 yen ($20,729,692), leaving a profit of 25,175,382 yen ($12,587,691).

The total daily capacity of the gas industry in Japan is about 65,000,000 cu.ft. American gas men will probably find great interest in the following listing of the processes used, and the number in use:

Horizontal retorts, 3715; chamber ovens, 234; water gas sets, 18; generator sets, 4; producer plants, 2; complete gasification installations, 6.

The complete gasification installations are in the following plants: The Kobe Gas Company has four Tully installations, and the Tokio Gas Company has one German type and one Strache.

In 1927 the industry carbonized 904,087 tons of coal, and used 166,160 tons of coke in the manufacture of water gas. There were 593,818 tons of coke produced, and 11,552,409 gallons of tar. Gas manufactured totaled 17,004,520,000 cu. ft., and the calorific value was from 366 to 419 B.t.u.

At the present time 4746 miles of main serve 795,226 customers. There are 2,043,829 burners in the country. The average distribution pressure is three pounds and the highest is thirty pounds. The largest main is a thirty-inch.

Mean prices of gas, coal coke, and tar are:

Gas	$1.25 to $1.75 per MCF
Coke	9.00 to 10.00 per ton
Coal	7.50 to 9.00 per ton
Tar	.25 to .40 per gallon

Today the industry serves about 20 per cent of the market, and we are working diligently for the remaining 80 per cent of the potential field.

Because the Japanese are utilizing gas equipment from Europe, England, and the United States, it is apparent that they will be especially qualified to conduct research and study on all phases of gas problems.

One of the problems today is the sale of coke at a reasonable figure. This problem of coke disposal is much the same as that in the United States, according to my observations.

It has been a great privilege to visit the United States. I find that the gas industry here is conducted on a scale which almost challenges the imagination. Some of the installations which I have visited have been so complete that I have expressed my astonishment to those who were conducting me about.

I bring to the American Gas Associa-

tion cordial greetings from the Imperial Gas Association of Japan, and from the entire gas industry. In closing, I would like to take this opportunity to thank officially all the American Gas men who have helped to make my trip pleasant and profitable.

New Safety Material Available at A. G. A. Headquarters

A FILM-SLIDE or "still-picture" lecture on the Shafer prone pressure method of artificial respiration consisting of eighty-one captions and pictures, all of which have been approved by Dr. Cecil K. Drinker, is now available to Associatoin members at the special price of $5 a print.

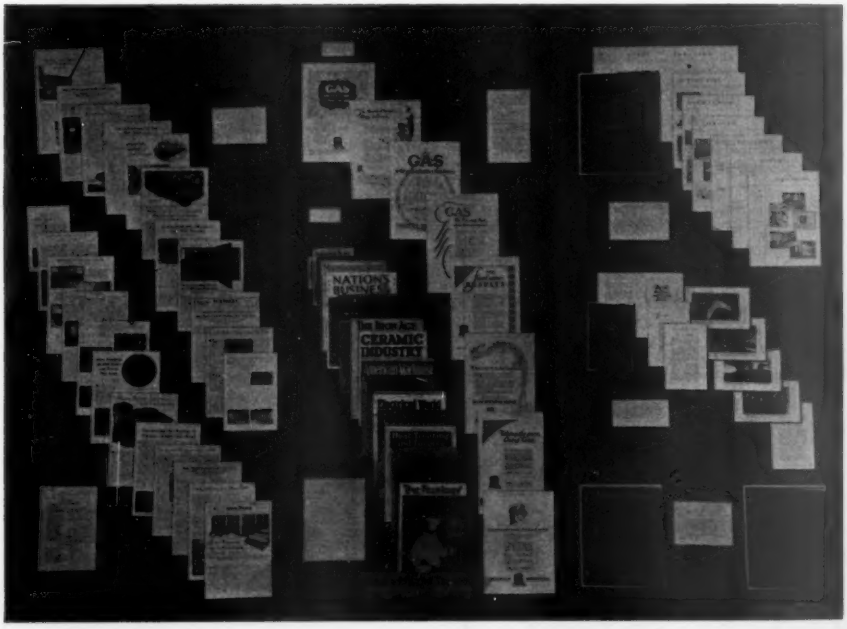
The film-slide lecture has been found particularly helpful and practical in training employees in the application of the prone pressure method as each picture or title can be kept on the screen as long as desired and ready reference may be made to any picture at any time desired.

This lecture in the standard width film is suitable for use in any "still-picture" projector. Companies not having the projector can secure one through the Association for $60, including a print of the lecture.

Reprints of Dr. Drinker's recent article, "Acute Asphyxia as a Medical Problem," which appeared in the April issue of the *Journal* of the American Medical Ass'n, can be secured from the Association at five cents each. These reprints are suitable for distribution to members of the medical profession in promoting the use of best resuscitation methods.

Reprints of "A Lecture for Use of Instructors and Teachers of First Aid and Resuscitation Methods," by Dr. Drinker which appeared in the June issue of the MONTHLY are available at a charge of five cents each. A complete set of five blue-print diagrams describing this lecture are also available in giant size at $5 per set.

In addition to the above new items, the Association can furnish member companies a special 1000 ft. of motion picture film (standard or narrow width) entitled "Artificial Respiration" suitable for employee and general public exhibition at a special price of $100 each.



Panels, showing advertising of the American Gas Association, which were displayed at the convention of the National Industrial Advertisers' Association, at St. Louis, Mo., June 11-13. A. B. Greenleaf, of The Peoples Gas Light and Coke Co., Chicago, Ill., designed and arranged the panels

N. J. Public Service Is 25 Years Old

Silver Anniversary of Public Service Corporation of New Jersey Is Observed Fittingly

THE Public Service Corporation of New Jersey is 25 years old. More than 500 men prominent in industrial, business, public, and professional life attended a dinner at the Robert Treat Hotel in Newark, N. J., on June 1 to observe the anniversary. Other high spots of the celebration were the publishing of a booklet entitled, "Public Service Review, 1928—25 Years of Public Service," and the unveiling of an oil portrait of Thomas N. McCarter, president of the corporation. Offices of the company throughout the state were appropriately decorated. The *Public Service News* also issued a special 25th anniversary number.

These five men have served on the Board of Directors of The Public Service Corporation of New Jersey since the formation of the corporation twenty-five years ago

Mr. McCarter was toastmaster at the dinner. He told of the future greatness of the state and the opportunities of the company. He also paid tribute to those employees, some 750 in number, who "have served the corporation and its subsidiaries 25 years, and who as a result wear the Public Service gold button," and he announced that "the board of directors has directed a payment to each of these employees of ten per cent of their 1927 compensation."

A. H. Moore, governor of New Jersey, paid glowing testimony to the value of the company, referring to it as an institution which is now a part and parcel of the state.

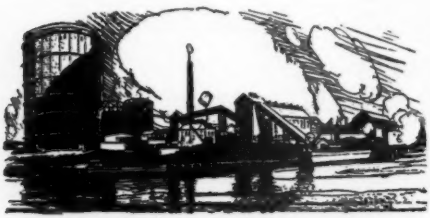
Owen D. Young, chairman of the board of the General Electric Co., congratulated the company, and said, in part: "Full meed of credit should be given the men of imagination of Public Service who at its inception were looking forward with courage, self-sacrifice, determination, and supreme confidence. Imagination means the leadership of the world."

Other speakers who emphasized similar thoughts were A. W. Thompson, president of The United Gas Improvement Co., Philadelphia, Pa., and Edmund W. Wakelee, vice-president of the Public Service Corporation in charge of law.

The unveiling of the oil portrait of Mr. McCarter was an interesting high spot of the celebration. Mr. Wakelee made the speech of presentation in the director's room of the Newark Terminal of the company on May 22. The portrait is the work of John Christen Johansen.

In the booklet, "Public Service Review," President McCarter writes as follows:

"Since 1903, more than $59,000,000 has gone into additions to and extension of gas facilities. Capacity of gas plants has been increased more than five times and a supplementary supply of gas from outside sources arranged for. Not only have the gas works in existence at the time of Public Service organization been remodeled and added to, but the works at Harrison, one of the finest of its kind in the world,



Artist's conception of the Public Service gas plant at Harrison, N. J.

has been constructed. The 1495 miles of main which then served the people of the territory have been extended until today they measure more than 4400 miles including connected mains that extend completely across the state from Jersey City to Camden.

"Our gas facilities are being planned and developed with the fact in mind of the increasing use of this ideal fuel in industry and for house heating.

"Public Service has given twenty-five years of public service to the people of New Jersey and on this anniversary of its organization, it pledges itself to continued effort in its task of providing those modern essentials—electricity, gas and local transportation—to the end that the progress and prosperity of the State shall be promoted and the welfare, comfort and convenience of its people conserved."

This booklet also contains a chronology of important utility events in the history of the state.

The Public Service Corporation of New Jersey was incorporated May 6, 1903. On June 1, 1903, the corporation started business.

When the papers of incorporation of Public Service Corporation of New Jersey were filed May 6, Thomas N. McCarter was named as president, John I. Waterbury, vice-president and Frederick W. Egner, secretary-treasurer. On June 3, the membership of the Board of Directors was increased to twenty-four. The first enlarged board consisted of: David Baird, Thomas C. Barr, Edward T. Bell, Samuel T. Bodine, A. J. Cassatt, Walton Clark, Thomas Dolan, John F. Dryden, E. B. Gaddis, George R. Gray, Hugh H. Hamill, William C. Heppenheimer, Lewis Lillie, Anthony R. Kuser, Thomas N. McCarter, Uzal H. McCarter, Randal Morgan, Ferdinand W. Roebling, John F. Shanley, Charles A. Sterling, P. F. Wanser, Leslie D. Ward, John I. Waterbury and E. F. C. Young.

At the meeting of the Board of Directors the same day the organization of the company was completed. Thomas N. McCarter was continued as president and the resignations of Messrs. Waterbury and Egner were accepted. The officers elected follow: Mr. McCarter, president; Randal Morgan, first vice-president; Anthony R. Kuser, second vice-president; A. B. Carlton, third vice-president; James P. Dusenberry, treasurer; Frederick Evans, secretary.

Of the men who originally served Public Service Corporation of New Jersey, Thomas N. McCarter and Frank Bergen alone hold the offices for which they were first chosen, although two other men—Percy S. Young and Edgar Allegaert—who were officers in the beginning, remain as such at the present time, Mr. Young as vice-president in charge of finance and Mr. Allegaert, vice-president in charge of electric operation.

In the twenty-five years of Public Service operation, more than $300,000,000 of new capital has been added for extensions and betterments.

In twenty-five years of progress, Public Service Corporation of New Jersey and its subsidiary utilities have made giant strides. Some of the more important statistics of growth in the period follow:

Operating revenue of subsidiary utility companies was $17,149,843 for 1904 (the first full year of operation) and $115,005,908 for 1927.

The cubic feet of gas sold in 1904 were 5,120,814,000 and in 1927 were 22,576,256,000.

The capacity of gas manufacturing plants in 1903 was 22,932,000 cubic feet and in 1928 is 114,050,000.

The total taxes paid in 1904 were $836,928 and in 1927 were $12,188,056.

The gas meters in service in 1903 were 187,384 and at the end of 1927 there were 715,523.

Some 1927 Statistics on the Manufactured Gas Industry

By PAUL RYAN
Statistician, American Gas Association

TO form any sort of adequate concept of the economic factors affecting the manufactured gas industry in 1927, it is essential to consider somewhat the factors affecting business and industry in general during the year, since it is becoming increasingly apparent within recent years that no industry or business may function by itself alone, but is intimately correlated and bound up with all of the various economic activities which go to constitute the American business scene.

At the outset then it must be considered that the year 1927 was one dominated by business recession. As indicated by Chart 1, in the automobile industry, now one of our basic industries, production declined by more than 20 per cent from 1926 to 1927, reaching the lowest figure in five years. In another basic industry, the mining of non-ferrous metals, production of copper declined more than five per cent, while lead and zinc mining was similarly curtailed. The textile industry was characterized by reduced production, wage cuts and plant shutdowns, while in the railroad industry, freight traffic, as measured by net ton miles, decreased one per cent, and car loadings declined three per cent. The number of workers unemployed throughout the country in 1927 was probably greater than at any time since 1922, while in the iron and steel industry, production of pig iron and steel averaged about eight per cent less than in 1926, with prices of pig iron reaching their lowest levels since the war.

The same general trends were apparent in other industries, which, because of competitive reasons, are more closely re-

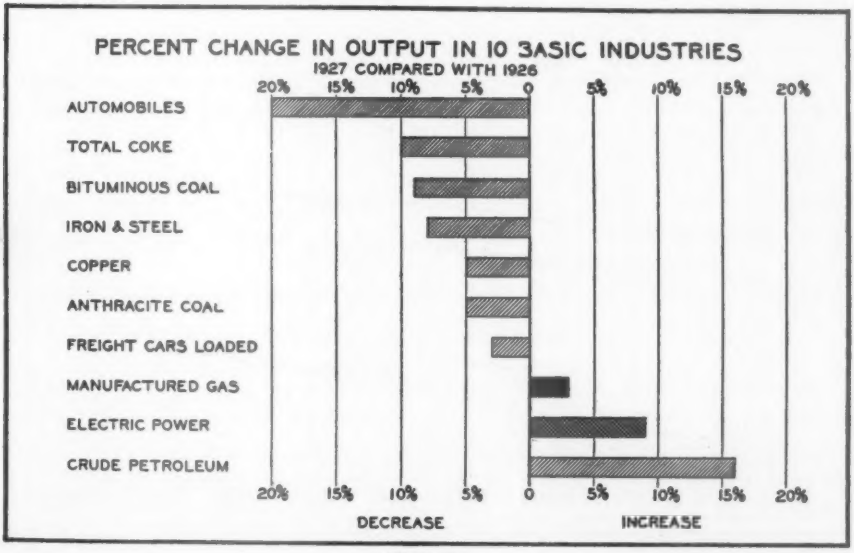


Chart 1

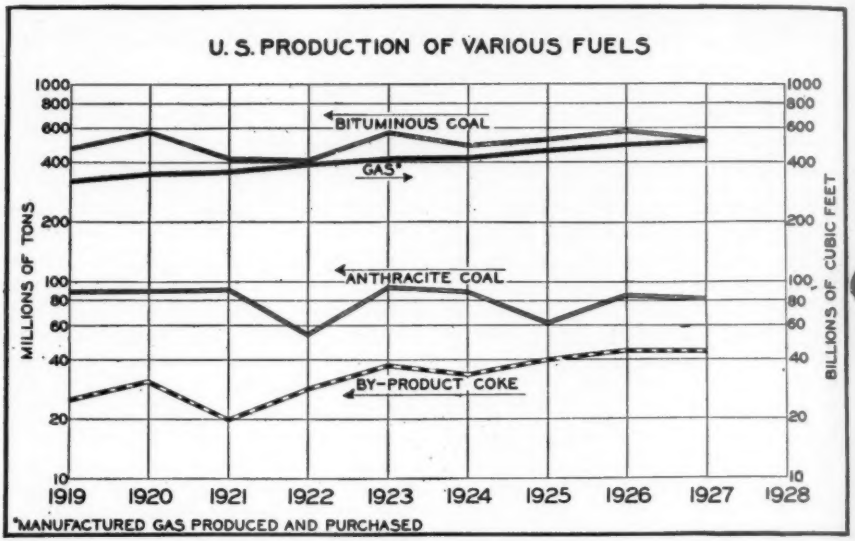


Chart 2

lated to the manufactured gas industry. A notable exception, however, occurred in the petroleum industry, where production and consumption during 1927 were the largest for any year on record. Production of crude petroleum during the year amounted to almost 900 million barrels, an increase of more than 16 per cent from 1926, while consumption rose from 620 million barrels in 1926 to 643 million barrels in 1927, an increase of about one and one-half per cent. As a

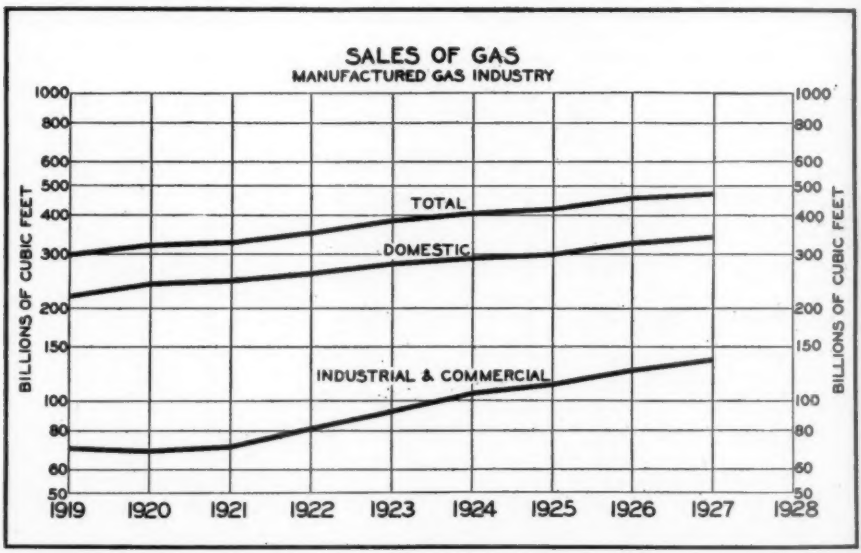


Chart 3

Table 1—Manufactured Gas Sales, 1927

	1926	1927	Increase or Decrease	%
Gas Sales (MCF)				
Domestic	323,183,000	329,000,000	5,817,000	1.8
Industrial & Commercial	126,405,000	136,400,000	9,995,000	7.9
Miscellaneous	6,043,000	5,600,000	*443,000	*7.3
Total	455,631,000	471,000,000	15,369,000	3.4
Gross Revenue from Sale of Gas	$486,000,000	$501,000,000	$15,000,000	3.1
Customers	11,047,000	11,450,000	403,000	3.6

*Decrease

result of heavy over-production of crude petroleum, more than 69 million barrels were added to storage in 1927. The result on the price structure of the industry was marked, prices of crude dropping almost 25 per cent to the lowest levels prevailing since 1916.

The production of fuel oil in 1927 was also of record-breaking proportions amounting to 390 million barrels, an increase of eight per cent. Average stocks of fuel oil also increased during the year by 17 per cent, resulting in a decline of six per cent in fuel oil prices.

As shown in Chart 2, production of bituminous coal dropped from 574 million tons in 1926 to 520 million tons in 1927, a decrease of nine per cent, while average prices for the year, as measured by the *Coal Age* Index, declined 10 per cent reaching the lowest levels since 1916.

Anthracite production in 1927 amounted to slightly more than 80 million tons, a decrease of five per cent from 1926. With the exception of the strike years of 1922 and 1925, this was the lowest production of anthracite for any year since 1906. In spite of sharply curtailed production, anthracite prices declined more than two per cent in 1927, the U. S. Bureau of Labor Statistics Index of retail anthracite prices dropping to slightly less than 15 dollars a short ton, being the lowest level reached by this index since the year 1919. The production of coke in 1927 decreased about 10 per cent, the total output of both beehive and by-product coke, as reported by the Bureau of Mines, being approximately 51 million tons. Most of the decrease, however, was borne by the beehive branch of the industry, the output of beehive coke falling from twelve and one-half million tons in 1926 to seven million tons in 1927, a decrease of 44 per cent. The output of by-product coke in 1927 was approximately 44 million tons, representing a decrease of only one per cent from the 1926 figure.

In addition to the slower pace of industrial activity during 1927, the year was characterized by unusually mild weather, both of which factors are related to fluctuations in sales of gas. While this slowed up somewhat the usual rate of increase in gas sales, yet compilations of the Statistical Department of the American Gas Association covering 86 per cent of the industry and extended by estimate to cover the industry as a whole, indicate that sales by the manufactured gas industry in 1927 amounted to 471 billion cu.ft., an increase over 1926 of 3.3 per cent.

As shown in Table 1, sales of gas for

Table 2—Production of Gas, 1927

	1926	1927	Increase or Decrease	%
Gas Produced (MCF)				
Water Gas	251,999,000	240,833,500	*11,165,500	*4.4
Coal Gas	71,082,000	81,322,290	10,240,290	14.4
Oil Gas	30,805,000	32,299,750	1,494,750	4.9
Coke Oven Gas Purchased	83,640,000	91,270,390	7,630,390	9.1
Total Manufactured Gas	437,526,000	445,725,930	8,199,930	1.9
Natural Gas Purchased	54,516,000	62,596,539	8,080,539	14.8
Total Produced & Purchased	492,042,000	508,322,469	16,280,469	3.3

*Decrease

Table 3—Fuel Requirements of the Manufactured Gas Industry

	1926	1927	Increase or Decrease	%
Fuels Used (Tons 2,000 lbs.)				
Generator Fuels (Water Gas)				
Anthracite	435,149	114,721	* 320,428	*—73.6
Coke Purchased	2,015,501	1,918,969	* 96,532	*— 4.8
Coke Made in Plant	845,439	1,094,791	249,352	29.5
Bituminous	655,630	609,889	* 45,741	*— 7.0
Coal Carbonized (Coal Gas)	7,143,502	7,883,278	738,776	10.3
Bench & Boiler Fuels				
Anthracite	165,775	179,714	13,939	8.4
Coke Purchased	184,614	174,833	* 9,781	*— 5.3
Coke Made in Plant	1,181,834	1,379,029	197,195	16.7
Bituminous	1,141,505	887,531	* 253,974	*—22.2
Total Anthracite	600,924	294,435	* 306,489	*—51.0
Total Coke	4,227,388	4,567,622	340,234	8.0
Total Bituminous	8,940,637	9,380,698	440,061	4.9
Gas Oil (Gallons) Water Gas	747,993,000	710,945,900	*37,047,100	*— 5.0
Gas Oil (Gallons) Oil Gas	248,202,000	256,778,700	8,576,700	3.5
Fuel Oil (Gallons)	20,785,000	15,632,220	* 5,152,780	*—24.8

*Decrease

commercial and industrial purposes registered the largest gain during the year with an increase of nearly eight per cent. Domestic sales increased by somewhat less than two per cent. Chart 3 compares these relative changes for the past few years. It should be noted that the data are plotted on the logarithmic or ratio scale, and the chart therefore indicates percentage increase, facilitating direct comparisons between the slope of one curve and that of any other curve, regardless of its location on the diagram. That is, such a chart compares percentage changes, while the arithmetic chart compares absolute changes.

In somewhat the same manner, Chart 4 compares the revenues from sale of gas, gas sales, and number of customers.

Table 2 indicates that for the first time in several years the production of water gas declined, dropping from 252 billion cu.ft. in 1926 to 241 billion cu.ft. in 1927, a decrease of 11 billion cu.ft. or more

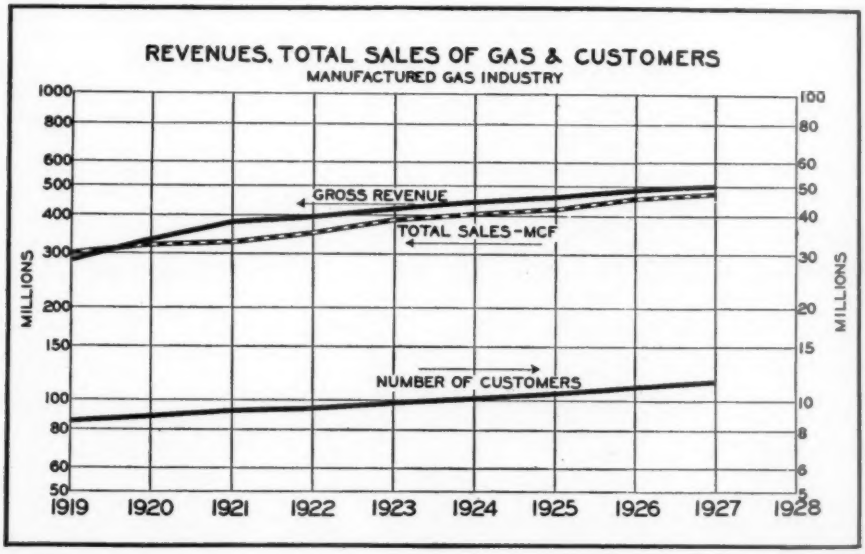


Chart 4

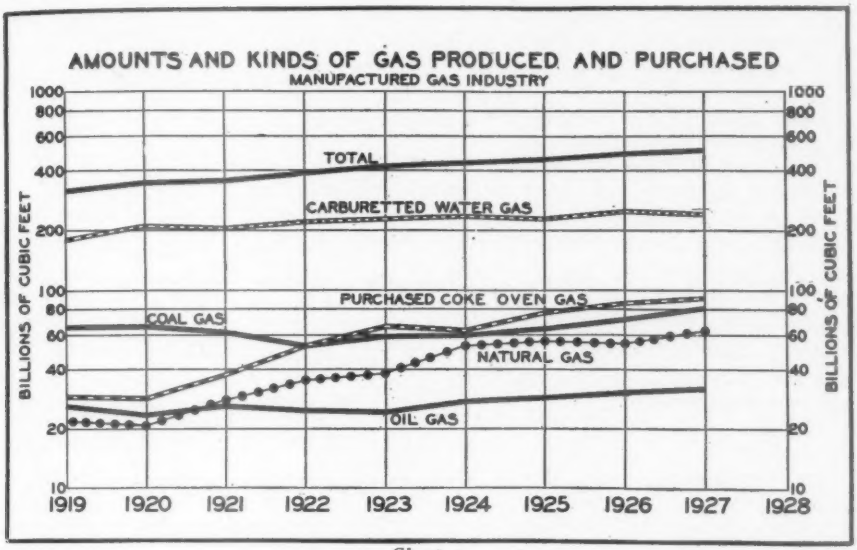


Chart 5

than four per cent. The amount of coal gas manufactured showed a gain of 10 billion cu.ft., rising from 71 billion cu.ft. in 1926 to 81 billion cu.ft. in 1927, which represents an increase of 15 per cent in coal gas produced. Natural gas purchased and mixed with manufactured gas for public use increased by nearly 15 per cent, while the coke oven gas purchased and distributed by manufactured gas companies rose to more than 91 billion cu.ft., an increase of nine per cent over

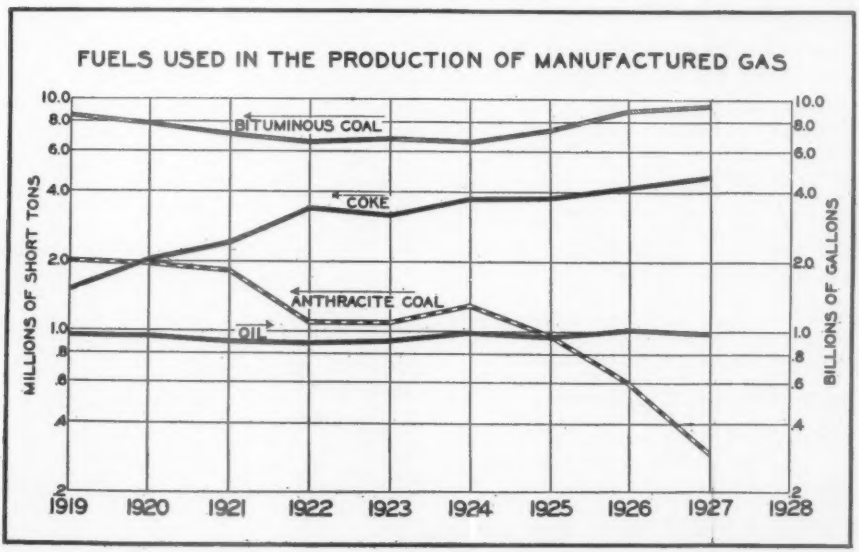


Chart 6

1926. The increased trend during the past few years toward purchased coke oven gas is shown graphically in Chart 5.

These changes in gas production are reflected in the fuel requirements of the industry. As indicated by Chart 6, the amount of anthracite coal used by the gas industry has become almost negligible in recent years, dropping from 600,000 tons in 1926 to less than 300,000 tons in 1927, a 50 per cent decline. The bituminous coal used by the industry for all purposes in 1927 amounted to 9,400,000 tons, an increase of five per cent, while the coke requirements rose from 4,227,000 tons in 1926 to 4,567,000 tons in 1927, an increase of eight per cent. Of this coke used within the industry, more than three million tons were used as generator fuel for water gas and over one and a half million tons were used as bench and boiler fuel. Detailed figures on the fuel requirements of the industry are shown in Table 3. It should be noted that these data do not reflect materials used for the manufacture of the coke oven gas purchased by distributing companies for public use.

Johns Hopkins Graduates Secure Positions in Industry

SEVEN graduates in gas engineering at the Johns Hopkins University, Baltimore, Md., in the class of 1928 have accepted positions in the gas industry.

Raymond M. Finn will join the staff of the American Gas Association Testing Laboratory at Cleveland, Ohio.

Louis W. Herbst, Jr., will become a cadet engineer with the Western Gas Construction Co., Fort Wayne, Ind.

Frank J. Maguire, Jr., has enrolled in the cadet engineering course of the Consolidated Gas Co. of New York, New York, N. Y.

L. G. Adams, of the Illinois Northern Utilities Co., has engaged the services of Nathan Shofer.

William P. Dittmar and Leonard A. Covell will enter the service of the Seaboard By-Product Coke Co.

Frank H. Dotterweich has accepted a position in the gas distribution department of the Consolidated Gas Electric Light and Power Co. of Baltimore, Md.

N. Y. Central Sells Holdings to E. L. Phillips

A. H. Harris, chairman of the executive committee of the New York Central Railroad, and E. L. Phillips, president of the Empire Power Corporation and the Long Island Lighting Company, have announced the sale of New York Central's holdings in the Mohawk Valley Company and in the New York State Railways to Mr. Phillips and his associates, bringing under their control public utility properties with assets valued at nearly $227,500,000 at the close of 1926.

The new company to be organized by the Phillips' interests will take over the Mohawk Valley properties and contiguous properties already owned by the Empire Power Company, bringing into a single organization electric and gas properties in New York State having an aggregate value in excess of $150,000,000.

Associated with Mr. Phillips in this transaction were the Jones' interests, represented by the Manufacturers' Trust Company, and W. C. Langley Co.

The Empire Power Corporation controls the New York Central Electric Corporation, which in turn controls the Empire Gas & Electric Company, the Seneca Power Corporation, and the United Gas and Electric Corporation. The latter company controls several properties in New York and Texas and in recent years disposed of utility properties in other States.

New office building of the New Orleans Public Service Inc.

Aspects of Public Utility Merchandising

A Thorough and Detailed Review of the Principles of Merchandising Activities

By M. W. WALSH
Merchandise Manager, The Connecticut Light and Power Company

IN this article the author outlines in a general and comprehensive manner the principles of public utility merchandising. He refers to public utility merchandising as a service to the public and to the industry. Both, he says, have profited by it.

Mr. Walsh presented this paper at the recent U. G. I. Annual Conference, at Philadelphia, Pa. Space limitations make it necessary to print the paper in two parts. The second installment will be given in the August issue of the MONTHLY.—Editor.

OUR business is selling gas and electricity, the utilization of which by the purchasers, means service to them. Directly, a cubic foot of gas, or a kilowatt hour of electricity, means nothing. They are valueless without a means of converting their energy into useful service. When used by proper appliances they perform a service to our customers. Our obligation then consists not only of making and offering gas and electricity, but also of supplying a medium through which they can be of service to the customer. This medium, the appliance, is the basis of developing utility merchandising.

Since the appliance is the medium that permits the use of gas and electricity, then our growth is dependent upon the development of all the channels through which these appliances may reach our customers. By taking the leadership in this respect we have placed upon ourselves the responsibility of research and the necessity that we be pioneers in the promotion of new devices that will use both forms of energy which we produce.

Developing hand in hand with the idea of creating a greater service to our customers is that of better public relations, which means the creation and maintenance of faith in the company by the consumer. Our customers know us by the way in which they are treated when dealing with us. Therefore, each sale and contact, is properly consummated, will result in closer relationship and a better understanding. This can best be accomplished by personal contact with the customers in their homes and in our salesrooms.

With the knowledge that the education of our customers and the sales of gas and electric consuming devices are required for increasing the use of our service and the promotion of good will among our customers, it is necessary for us to establish the fundamental principles upon which such an activity should be organized.

The whole merchandising structure will be found to comprise several co-related departments whose work as a whole or in part has some direct bearing on the promotion of service in connection with the sale of appliances to our customers. An outline of this structure follows:

A. ORGANIZATION
- Personnel
- Merchandise
- Business Location

B. SALES PROGRAM
- Appliance Selling in General
- Special Activities
- Advertising
- Credit
- Payments
- Collections
- Installation and Service

C. DEPARTMENT ROUTINE
- Records
- Budgeting and Forecasting
- General

Organization is the first step in carrying out the aims and purposes of the merchandising department. The better the organization the greater the results and every effort within reasonable bounds should be followed through to establish the highest possible degree of efficiency.

PERSONNEL

Of paramount importance in the organization is the sales personnel since it has been definitely proven that good personal contact with the customer is by far the best way to promote the interest of the company and stimulate the good will of the customer. Sales people should be carefully selected and then trained to a high order of proficiency. They must realize that they are connected with a company which renders to the community a service that cannot be measured altogether in dollars and cents, but also in terms of modern efficiency. Many of our salesmen are residents of the sections in which they work, entering into the community spirit, and looked upon as respectable, thrifty and honest citizens. This type of salesman builds up a clientele that has faith in him, his employer and the things offered for sale. The establishment of this faith is of the utmost benefit to the company.

The outside sales force may be grouped in three divisions: territory men, specialty men and home service workers. The territory man sells the entire line of merchandise and is confined within well-defined areas. He must have a sufficient knowledge of all of the various appliances sold by the company in order to intelligently carry on his work. The specialty man is trained to be exceptionally efficient in the selling of but one of several important load-building appliances such as gas house heating equipment, commercial cooking appliances, etc., all of which require, in order to be sold properly, a comprehensive knowledge of the appliance and its utility, and an intensive study of the customer's needs.

Home service workers perform a service which many industries have adopted because it promotes business, both directly and indirectly. Proper use of appliances promotes sales and also greater uses, and any reasonable expense that will increase business is justifiable. Our obligations extend beyond the installation of a meter or the sale of an appliance. We must follow through and be assured that proper and sufficient use is made of our commodities.

The compensation of salesmen may be discussed at length, but there are two important principles from the utility standpoint to be considered. First: The plan must be designed to attract the proper caliber of men to the organization. Second: It should automatically encourage the sale of appliances from which the company will derive the most benefit. Such a plan can be built up on the following basis:

1. Basic Salary
2. Commission on Volume of Sales

(Continued on page 420)

Newspaper advertising is playing a part in smoke abatement work

Why a Public Utility Advertising Contest?

By DAVIS M. DEBARD
Sales Engineer, Stone & Webster, Inc.

EVERYBODY loves a contest. Everyone has an inborn desire to excel, whether it be at play or business. While all honor rightfully belongs to the winner, each competitor is the better for having entered. This has been plainly demonstrated in the advertising contest conducted for the last six months among all Stone & Webster companies.

Advertising is as distinctly a part of the business of a public utility as any other phase of the company's operation. Aside from the service of the company itself, advertising is always a spokesman for the utility, imparting its messages at regular intervals to its customers and friends.

We consider newspaper advertising the best form of advertising. It is our desire, therefore, to make these advertisements appearing in the newspaper reflect credit upon our business, just as much as does the service we render. To provide good service without telling the public about it is one thing; but to provide the service and to get the public to appreciate it through contacts in the newspaper is certainly a commendable activity and one which must react favorably on the utility itself. When one considers that we spend more than one-half million dollars a year in advertising in our properties, and that these properties are widely scattered, serving both large and small communities, with a wide variation in size and capacity of the weekly, bi-weekly, and daily papers serving these areas, the problem of getting the greatest value for each dollar expended in advertising becomes vital. The matter was given much thought, and an advertising contest was decided upon.

Each operating company clips from the newspaper its advertisements for the calendar month and binds them in a folder in scrapbook form. The electric, gas, and street railway advertisements are arranged in a separate binder. We secured a qualified and impartial judge, Irving M. Tuteur, vice-president of the McJunkin Advertising Company of Chicago. His company for a number of years has handled utility accounts.

Each month all the previous month's advertisements of our companies are studied by the judge and his assistants. A report is rendered, giving the first, second, and third winners in the three groups and the reasons why their advertisements are superior. Comments are made on each company's portfolio. A copy of this report with photostats of outstanding advertisements is mailed to every company. This frank discussion, coupled with the fact that this report is presented to all our properties so that each can see what the other companies are doing, is putting each company more on its toes in the matter of advertising than would perhaps otherwise be possible.

The value does not end here, however. These monthly reports are taken by the sales manager to the newspaper editor who enters into the spirit of the contest and tries to improve his half of the work. On arriving in Savannah recently, whom should I find but the manager of the newspaper in conference with the sales manager, trying to explain how a cut happened to be a little out of line in a previous day's advertisement.

Mr. Tuteur says:

> Sometimes type setters are prone to take the first type face that they can lay their hands on, whereas very often another type face would give the advertisement a much better appearance. They are also often prone to jumble up the type matter with varying faces and also to spread the material pretty well over the entire advertisement, unless they are given definite instructions on the layout as to just what is wanted.
>
> I believe that, especially in the smaller places, more attention can be devoted to the matter of

the typography and printing results of the newspapers themselves. These smaller newspapers, as a rule, need a considerable amount of guidance, and we have to be patient with them and work with them co-operatively in order to secure their best results.

We have also learned that it pays to prepare advertisements well in advance and give the newspaper ample time to set the copy. We then can study and correct the proofs, working with the newspaper for the best results. Newspaper advertising is the merchandiser's greatest co-worker. Therefore, in merchandising appliances and load building, it becomes necessary for us to make our advertising as attractive as possible, and our appeal as pointed as possible to secure the desired results.

We are happy to say that our contest has already done much to stimulate interest, improve newspaper copy, and bring about general improvement.

Following is a list of the companies winning first place in the contest to date:

	Number of Times a Winner
ELECTRIC COMPANIES	
El Paso Electric Co.	1
Puget Sound Power & Light Co.	2
Virginia Electric & Power Co.	3
Blackstone Valley Gas and Electric Co.	1
GAS COMPANIES	
Haverhill Gas Light Co.	1
Lowell Gas Light Co.	3
Fall River Gas Works Co.	2
Blackstone Valley Gas & Electric Co. and The Pawtucket Gas Co.	1
STREET RAILWAYS	
Northern Texas Traction Co.	4
Jacksonville Traction Co.	1

Grand Rapids Co. Offers Mailing Piece to Industry

THE Grand Rapids Gas Light Co., Grand Rapids, Mich., is offering to member companies of the American Gas Association the opportunity to buy at special prices quantity lots of a broadside letter developed by the company. The letter has proved especially resultful.

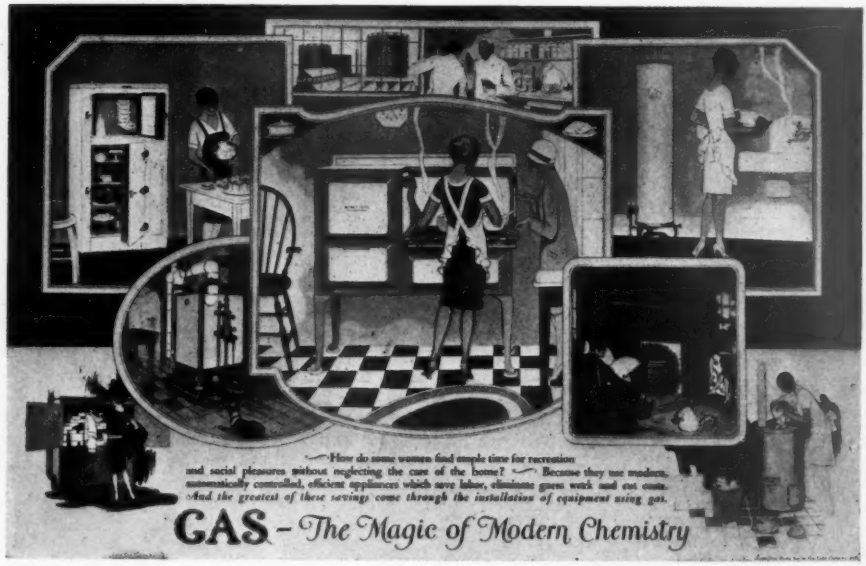
Companies desiring further information should address A. G. Shroeder, secretary, Grand Rapids Gas Light Co., Grand Rapids, Mich.

The first page of the broadside letter contains a sales talk on various appliances. The second and third pages carry the illustration shown below.

High spots of the sales talk are given here:

"In this age of rapid motion, of speed in living, do you realize how well Modern Gas Service fits into the picture?

"Many are the new inventions, discoveries and processes,—yet, GAS is still the speediest, most flexible, most convenient fuel available, and has the very great advantage of being highly economical."


How do some women find ample time for recreation
and social pleasures without neglecting the care of the home? Because they use modern, automatically controlled, efficient appliances which save labor, eliminate guess work and cut costs.
And the greatest of these savings come through the installation of equipment using gas.
GAS - The Magic of Modern Chemistry

Recent photograph of the new A. G. A. Testing Laboratory building

New Laboratory Building Nears Completion

Finest Gas Testing Laboratory in the World Will Be Finished Around August 1

THE new A. G. A. Testing Laboratory building is rapidly nearing completion and, it is hoped, will be ready for occupancy about August 1, when the Association will be able to boast not only the most completely equipped gas appliance Laboratory but also the finest building dedicated to the testing of gas appliances in the world today.

The main structure of the building is complete, as is shown in an accompanying illustration, and plasterers, pipe fitters, and carpenters are now busily engaged in making a comfortable and pleasing interior.

In order to supply each appliance testing room with the gases, compressed air, and water necessary to carry on testing activities, more than 10,000 feet or nearly two miles of pipe are being installed, outlets being so arranged that an ample number of testing stations will be available in each department.

Two 5000 cubic foot gas holders being constructed by the Stacey Manufacturing Co. are practically completed, and another of the same capacity now being used in mixed gas research work is to be removed to a location immediately in the rear of the new Laboratory building. These holders are to contain coke oven gas, water gas, and mixed gas for testing; natural gas is to be taken at present from the Cleveland city mains.

Final plans call for a holder for natural gas to be located in line with the other three which is to be erected later. A booster house to be used for filling the various holders and for mixing of gas is to be built between two of the holders and near the rear entrance of the building so that it is easily accessible from the test rooms.

In addition to providing several times the present testing and office space, the new building will effect centralization of these two and the storage department and will have considerable research space and rooms for manufacturer's test work. The latter will be a much needed advantage,

it is seen, for manufacturers who wish to alter their appliances to correct them for re-tests or for experimentation on gases other than those available to them in their respective localities.

St. Louis Starts Two New Home Service Features

The home service truck

THE Laclede Gas Light Company, realizing that many St. Louis women anxious to attend the home service cooking classes were unable to spare the time to come downtown, has evolved a plan which takes home service instruction and the story of gas cooking to these women. A modern, completely equipped kitchen on wheels drives out each day to give cooking demonstrations and to distribute recipes among the women in distant parts of the city.

This traveling kitchen is installed on one of the company's trucks and is equipped with a gas range, refrigerator, water cooler, demonstration table, and incinerator. On either side of the range are cupboards for dishes and cooking utensils. The floor is covered with a bright, cheerful linoleum and in the rear window is a kitchen ventilating fan.

Each morning the truck makes trips to the various markets and other places in the city where women congregate. The traveling kitchen is accompanied by a cooking demonstrator from the home service department who prepares simple dishes, such as cookies, biscuits and cup cakes. While food is cooking, the demonstrator passes out new recipes and answers any questions that onlookers may ask.

The daily visits of this kitchen on wheels is proving popular with women in all parts of the city. They look forward expectantly to each day's visit and are always anxious to get their copies of the new recipes. Many who are unable to come downtown to the regular classes have written to express their appreciation of the new traveling kitchen. This idea is not only telling the home service story to those who could get it in no other way, but it is also gaining the good will of housewives throughout the city.

Another innovation which the Laclede company has brought to St. Louis is home service demonstrations among the negroes. Mrs. Mary Cannon, an excellent cook and well known among the Federation of Colored Women's Clubs, is employed as demonstrator. When demonstrations were started in April, they were held twice a week. Now there are five each week and many additional calls. Most of the demonstrations are conducted before neighborhood groups in close touch with the Y. W. C. A. and Urban League. These demonstrations are proving extremely popular, for the colored people are taking great pride in the fact that the Laclede company has employed a woman of their race in the home service department.

Consolidated of New York Claims Insurance Record

THE Consolidated Gas Company of New York claims the world's record for employee participation in group insurance. On page 264 of the A. G. A. MONTHLY for May, an item appeared stating that "of all employees of The Peoples Gas Light and Coke Co., Chicago, Ill., eligible to participate in an additional insurance opportunity recently offered, 97.4 per cent have taken advantage of it."

John Stilwell, vice-president of the Consolidated Gas Co. of New York, writes to the editor as follows:

"I wish to call your attention to the fact that in the Gas Companies Mutual Aid Society of New York 99 per cent of all eligible employees were insured under group term insurance according to the census taken of payrolls as of May 5, 1928. This percentage figure has been maintained at 99 per cent or more for the past three years."

British Commercial Gas Ass'n Meets in October

THE seventeenth annual general meeting and conference of the British Commercial Gas Association will be held at York, England, October 22 to 24, 1928, according to announcement by J. C. Walker, secretary of the association.

Research Will Lead to Forging Developments

Brief Sketch of Gas Research Now in Progress at the University of Michigan

By DONAL HAMILTON HAINES
Director of Publicity, Department of Engineering Research, University of Michigan

BECAUSE of its faith in the results to be obtained through properly conducted scientific research, the American Gas Association has made available to the Department of Engineering Research of the University of Michigan a generous grant for investigations seeking to provide proofs of the advantages of gas over other fuels employed to produce the high temperatures required in the forging furnace.

In April, 1927, the American Gas Association decided to begin the fundamental investigation of the gas-operated furnace's possibilities; $10,000 was appropriated for the year's work, and Walter E. Jominy, associate investigator in the Department of Engineering Research of the University, was selected to conduct the investigations in cooperation with the Surface Combustion Co.

As frequently happens in research projects undertaken in the interests of some industry or group of industries, the investigators were compelled to confine their labors for a time to the realms of pure science for the reason that such experimental work as had been done in connection with the heat-treatment of metals had not provided them with a convenient "jumping-off place" well along the path. The first step was the preparation of an exhaustive bibliography, which amounted to a statement of their problem in scientific terms and the systematic arrangement of such data as had been provided by earlier investigations.

Early in the course of the work, it was clear to the investigators that some first focal point must be assumed as an initial objective; for the whole field open to them was so vast that there was little possibility of any significant results within any given period unless some such concentration was made.

They knew that in forging, gas as a fuel possessed two advantages over oil (1) that it permitted a better atmospheric control and (2) a somewhat easier control of temperatures. Their immediate problem then narrowed itself to the design and making of a furnace in which these two points of advantage in control might be employed for the better handling of some problem very familiar to the manufacturer. They selected "burning" as the focal point for their further labors.

The term needs a word of explanation. Burned steel is steel whose physical properties have been seriously impaired by heating to a high temperature and which cannot be restored to normality by any process of heat treatment or by re-forging. Steel thus burned is, of course, quite worthless for use.

Unfortunately for the manufacturer (of automobiles, as a convenient example) the burning of steel billets is not a phenomenon which can always be detected by superficial evidences. A forging may go from the forge to the machine shop in seemingly perfect condition for being used, but with an interior as useless for its intended purpose as though it had been hollowed out and so much lead substituted.

The accompanying illustrations show graphically two contrasting cases of "burned" steel. In Figure 1 the damage was plainly evident when the forging was completed, the surface being torn and fissured. In Figure 2 the piece after forging appeared to be entirely sound and the damage was only apparent when the piece was sawed in two and the surface polished. Both of the cuts represent surfaces which have been sawed and polished, but not etched. The black lines represent actual cracks in the steel. The illustrations are substantially full size. Should this

Section of steel after "burning." Damage is clearly visible at external surface, but there is also injury not apparent to inspector

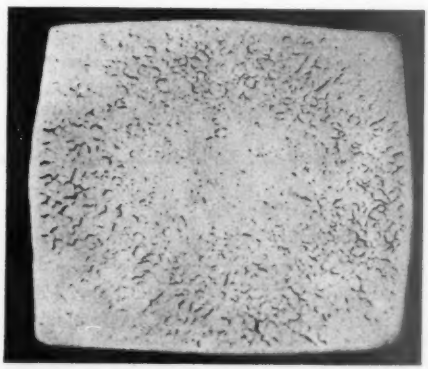
burned piece ultimately become a connecting-rod, crank-shaft or—worst of all—a steering-knuckle, the consequences would certainly be serious and might easily be tragic. Yet there is no absolute guarantee against such an accident, and it is entirely possible that burned steel has been forged in the most carefully controlled plants.

The only safeguards against burning are those measures which can be taken in advance; otherwise the one certain proof that a steel billet has not been burned internally is to be had only by breaking it open. Through long series of experiments under measurable conditions with all factors known, it has been possible to build a system of shop procedure in which this danger is reduced to the minimum, but the protection is not absolute. There enters the human element and with it the ever-present possibility of error. It is the man in charge of the forge who decides the instant at which he considers the steel ready to be worked. Backed as his decision is by familiarity with the whole process and the known laws governing it, the chances are decidedly in his favor. The actual proportion of burned steel turned out and sold for various uses by the unconscious manufacturer is undoubtedly small, but the possible consequences through the collapse of a piece thus flawed are so serious that the complete elimination of this small chance must prove a great boon to the entire metal industry.

In view of this situation, the University and the Surface Combustion Co. have concentrated their immediate efforts upon a single point—the development of a technique which, thanks to the more perfect control of the gas used to supply heat, would make the burning of steel impossible.

At the present time their investigations have not reached a point where conclusions can be made public, nor is it the way of the scientific investigator to make promises of ultimate success until he knows that he is "out of the woods." But it is possible to describe some of the factors with which they have had to contend in the course of their labors, and some interesting facts which have been brought to light as the experiments went forward.

It had long been maintained, for instance, that many forging troubles might arise from considerable differences between the "skin" and internal temperatures of a piece of steel at the moment it was taken from the furnace, this difference quite possibly varying in some proportion to the dimensions of the bar or ingot. Exhaustive experiments in the laboratory have demonstrated that such differences, while they do exist, are too slight



Section of steel "burned" only internally. Surface gives no evidence of injury and inspector would have passed forging as sound

to have any serious effects upon the subsequent working of the metal in billets 4" square or less. A bar 4" square which had been heated to a temperature in excess of 2200° F. showed the temperature of the outside of the bar approximately 150° higher than the interior. This difference in temperature could hardly cause any corresponding difference in resistance between the surface and interior of the metal to any forging process sufficient to interfere with it, even should the gap of 150° be maintained up to the actual beginning of the forging. It was further shown that in the mere operation of moving the steel from furnace to forge there must be a slight loss of heat, proportionately greater at the surface, which might be sufficient to bring all parts of the bar to the same temperature.

This is typical of the sort of "side issue" which the investigator has constantly to meet, subordinate questions which must be cleared away to make clear the path of the central line of research.

In the present problem, since the desired object was a furnace which could be guaranteed against burning steel, the chief business was a closer approach to perfection in temperature and atmosphere control than had previously been attained, and this meant, by inference, more accurate measurement of temperatures than had been found necessary in actual practice. It was here that some of the most persistent and perplexing obstacles were encountered.

Temperatures were measured and recorded by means of a pyrometer, a combination of a thermocouple with a recording apparatus. The experimenters knew in advance that it would be necessary to use a platinum thermocouple, as temperatures from 2000° to 2400° F. would have to be measured, but the problem which they were called upon to solve was to protect the platinum wires and bead of the thermocouple from the effects of a carbonizing atmosphere, and then deal with the fresh difficulty which these protective measures produced.

The thermocouple was protected from the effects of such an atmosphere by an armor of three porcelain tubes, one inside the other, the inner tube being bored with two longitudinal holes so that the two wires might be kept separated. This arrangement provided adequate protection, but did not provide the accurate measurement of temperatures required, for the ends of the porcelain tubes were an insulation against heat, and the thickness of the caps of the two outer tubes left the bead of the thermocouple nearly two inches from the billet of steel whose temperature was to be measured.

This fresh difficulty was handled by cutting off the caps of the two outer porcelain tubes and substituting platinum caps. These caps were the best possible conductors of heat, and were so much thinner than the porcelain walls which they had supplanted that the bead of the thermocouple could be brought far closer to the steel billet in the furnace.

Not only did these successive triumphs over obstacles take time, but they created an unexpected amount of expense, for a thermocouple of platinum costs nearly ten times the price of the ordinary type. The platinum caps are correspondingly expensive, and both have frequently to be renewed in the course of such extended experiments as the whole problem requires.

Other details might be added, not so much descriptive of the work as of the constant minor problems with which the experimenter has to deal in order to maintain progress toward his ultimate goal.

As already stated, the moment has not yet arrived for a discussion of results, and it is not the way of the scientist to speculate on possible results, but this very brief sketch may serve to indicate the fashion in which this project has been undertaken, and to forecast the sound and thorough process by which results will be obtained even though any hint as to the nature of these findings would be premature.

This investigation is by no means the only one which has been conducted in this field by the University. The work now being done for the Michigan Gas Association by E. S. Pettyjohn, Investigator in the Department of Engineering Research, has already been described in these columns, while studies of a closely related nature were carried out several years ago by Professor A. H. White, head of the Department of Chemical Engineering, associated with Messrs. Homer T. Hood, John T. Naylon and Bert A. Standerline, holders of the Michigan Gas Association Fellowship in Gas Engineering. The nature of these investigations is indicated by the titles of the four pamphlets in which the results were published—"The Influence of Gases Within the Oven on Baking Japans," "The Heat Treatment of Iron and Steel in a Neutral Atmosphere," "Heat Treatment of Brass on Neutral and Reducing Atmospheres," and "Gas as a Case-Hardening Agent."

H. L. Doherty Sends Greetings to Spring Conference

THE following telegram of greeting from Henry L. Doherty, president, Henry L. Doherty & Co., New York, N. Y., was read at the Spring Conference of the Executive Board and Advisory Council of the American Gas Association, at Atlantic City, N. J., June 1-2:

"Colonel Oscar H. Fogg,
"Atlantic City, N. J.

"I was greatly flattered and pleased to receive your message saying you hoped I would be at the Spring Conference but if not you thought the members would like to have a message from me. I am glad to be remembered and that you think that all of the other members will want to hear from me. This old disease, arthritis, is a troublesome thing and it and its results can last a long time. There is nothing that would give me so much pleasure as to be amongst my warm friends with whom I have been associated since the American Gas Association was formed, but my physicians have decided it would be unwise for me to try to attend this meeting. In spite of my illness my mind frequently goes back to the gas business and when I fully recover my health I think I will be able to tell you many great things whereby the gas business may be improved. I always worry for fear those who refuse to recognize that we have any competition or will refuse to discuss it will allow us to be driven out of profitable fields the same as we have been in years gone by. Our conferences are meant to be a place where we can discuss things freely that can not be discussed at our conventions and a place where nothing will be discussed that can be discussed at our conventions. The gas business was handicapped for many years by politics in our associations. There has been little of that in the American Gas Association and I hope every man will realize how pernicious and harmful politics can be and will guard against its re-introduction.

HENRY L. DOHERTY."

A special committee sent the following to Mr. Doherty:

"Henry L. Doherty,
"Battle Creek, Mich.

"Your associates in the Executive Board and Advisory Council of the American Gas Association now in session at Atlantic City heartily reciprocate the kindly expressions of your fine message just received. We fully understand the reasons for your absence from our deliberations which have yearly benefited so greatly by your wise counsel and far-seeing recommendations. We have always welcomed your unselfish cooperation in the work of the Association. We shall maintain the ideals that we hold in common and with the continued support of yourself and other leaders of the industry and of the loyal workers in all its branches we shall go forward along the lines of wholesome and progressive development. Cordial greetings and best wishes from your friends and fellow members. This message is transmitted by a special committee of the conference.

GEORGE B. CORTELYOU, Chairman
ALANSON P. LATHROP
BERNARD J. MULLANEY
OSCAR H. FOGG, Ex Officio"

New building of Consolidated Gas Co. of N. Y., now under construction

Facing the Domestic Cooking Load Problem

Domestic Range Committee of the Commercial Section Plans an Aggressive Program

By P. D. WARREN
Chairman, Subcommittee on Publicity, Domestic Range Committee, A. G. A.

VAUGHN FLANNERY told the Art Directors' Club of New York that women of today are different. Their work is different. Their leisure hours are spent differently. Their outlook is very greatly changed by new factors in their existence. He said that the trouble with so many of us who are engaged in selling chiefly to women (and more than seventy per cent of the total output of gas in the United States is sold to women) is that many of us are reluctant to accept the new trend of things.

The Domestic Range Committee is studying all phases of the domestic cooking problem

It is a fact that the manufacturer who faces the problem of doing his line over and accepting the newer modes doesn't know where to turn. He is facing a real problem. Gas companies never met anything like this before. In many sections the electric range manufacturer has stolen a march on the gas man and it is hurting his business.

Gas sold for use in ranges is the very backbone of our industry. It is being threatened by forces so enormous that it is destined to take the concerted effort of the entire gas industry to combat them. If seventy per cent of the total consumption of gas in the United States is for domestic purposes, does it not deserve a proportionate amount of your attention?

Logically, we cannot meet the situation or attempt to curb it without knowing the causes. Many say it is due to the advent of the small kitchenette apartment, the greater use of prepared foods, and the growth of bakeries, restaurants, hotels, and clubs. These factors all contribute, in a measure, toward drawing the people away from their homes. The fact that they are not wholly apparent in all communities does not indicate that they will be without serious effect in the future. These seemingly intangible tendencies have been qualified to some extent by several excellent papers written recently, quoting figures on the growth of restaurants, bakeries, laundries, etc., but before remedies can be suggested, the situation must be diagnosed more closely.

The officers of the American Gas Association feel the presence of the problem and see the need for correcting it. As a result, the Domestic Range Committee was created. The Committee is composed of three sections, including the subcommittee on surveys and remedies, a subcommittee on publicity, and another subcommittee on sales manual.

The first named is charged with the responsibility of making a complete survey of the entire United States by districts, to obtain accurate data and to develop suggestions or improving existing conditions. The second subcommittee will give publicity to the findings of the subcommittee on surveys and remedies and will also issue other information in connection with the domestic cooking load. The third subcommittee will prepare a sales manual which will be designed to help the gas companies' salesmen sell gas cooking appliances more effectively.

It is a tremendous undertaking to make a complete survey of existing conditions

in all parts of the country. The most desirable method for collecting the data seems to be by questionnaire, but such a plan will not be successful unless each gas company gives the matter careful and serious consideration, stating the facts as they really are. Here is your chance to do something toward retaining and building up the cooking load. Your cooperation is earnestly sought. Frankness is essential to making the survey complete and comprehensive. The value of the work depends to a large degree upon the cooperation secured from the companies and it is hoped that a large and prompt response will be received.

The Committee pledges that all the material and information supplied by the member companies will bear no identification mark beyond the secretary's office. Tabulations will be made from the questionnaires sent in and from these the study and analysis will be made.

It is the duty of every gas company manager to keep as much abreast of the times as possible. Instead of ignoring the inevitable trend of living conditions that is affecting our business, it will be more to the point to acknowledge this change and spend the time and effort necessary to find a means for combating existing conditions.

Gas Industry Praised by Bank Publication

A RECENT issue of *The Index*, published by the New York Trust Company, comments as follows on the gas industry:

"The manufactured gas industry lays claim to a record of 21 years during which there was no decrease in annual sales or in annual gross earnings. This is the more noteworthy because during that period the industry went through a revolutionary change. The introduction of electricity almost immediately usurped the place of gas in domestic lighting, but the result was the development of a multitude of new uses for gas as a fuel.

"In the business of heating, gas today is supreme. The American Gas Association estimates that approximately 52,000,000 persons in this country are served by gas through the use of 9,800,000 stoves, 3,400,000 water heaters, 4,400,000 space heaters, and several hundred thousand central house heating systems. The last-named use is still only at the beginning of its development and since 1919 has increased more than 2000 per cent. Gas is, of course, more economical than coal as a fuel, inasmuch as about 70 per cent of the potential efficiency of coal is wasted in the average home and anywhere from 25 to 75 per cent in industrial plants. In addition, fuel gas is cleaner, doing away with the smoke and soot, and leaving no ashes for removal. Due to the wastefulness of ordinary coal consumption the industry believes that the necessity for conservation will eventually prohibit the burning of coal as a domestic fuel.

"Together with oil, gas represents one of the only two practical automatic methods of house heating. Due to the present low prices of oil the latter fuel is somewhat more economical, but the industry believes in time oil will be reserved for purposes of transportation.

"The rapid expansion in the use of gas for heating is being duplicated on a smaller scale in its use for cooling purposes. Iceless refrigeration has created another market for gas and gas refrigeration is claimed to be more economical than refrigeration by electricity. A possible extension of this function may exist in the use of gas as a general house cooling system in the summer which would balance its use as a heating medium in the winter months.

"These domestic uses of gas, however, are of less importance than the potential industrial consumption. The use of gas as a fuel in industry is showing not only an absolute increase year by year, but an increase in the proportion of the total consumption.

"In 1910 only five per cent of the total output of gas was used in industry; today the proportion is 28.4 per cent. The significance of this trend is emphasized by the fact that while the average domestic customer uses gas about 16 per cent of the time and hotels, bakeries and newspapers about 28 per cent of the time, the average industrial gas consumer uses gas about 60 per cent of the time. This industrial load is, therefore, a fairly constant one and does not require much reserve equipment to meet sudden peaks of demand.

"In line with its expanded markets, the industry is considering the problem of long distance distribution of gas which will enable it to reach small towns not now on the main gas lines. Large central stations capable of long distance transmission will undoubtedly be one of the factors in future developments."

Editorial

Research

OF the many significant features of our business that are indelible marks of a progressive and intelligent industry, at the present time we are most vitally concerned with research. As the industry has progressed in a satisfactory and substantial manner, it has become plain that research has played and will continue to play an increasingly important role.

We see evidences of the value of scientific research on every hand. All branches of the industry are imbued with what has been called the "spirit of inquiry," and salesmen, accountants, executives, engineers, and all others engaged in the business of serving gas to 75,000,000 people are lifting their voices in a demand for facts.

To the American public which benefits from the services rendered by natural and manufactured gas, the intensive interest in research is of paramount interest. While the industry is anxious to solve its problems efficiently from the point of view of its own interest, we know that means the best interests of our customers.

President Fogg's appointment of the Committee on Coordination of Scientific and Marketing Research is a guaranty that all research activities of the American Gas Association will be conducted in an orderly fashion, with proper emphasis given to the more pressing problems, and with no duplication of effort. The industry is fortunate in having Mr. H. C. Abell as chairman of this committee, with the following personnel: Messrs. W. C. Beckjord, F. C. Freeman, A. W. Lee, E. D. Milener, B. J. Mullaney, C. E. Paige, Edward Porter, T. R. Weymouth, and H. Leigh Whitelaw.

With research as our tool, even the most optimistic predictions concerning the future growth of the industry may come to pass within a relatively few years.

25 Years

IT is a real pleasure to be able to extend hearty congratulations to The Public Service Corporation of New Jersey on its twenty-fifth birthday. It is doubly gratifying because in the years of the company's life it has been a leader in the public utility field and has always stood for progress and adequate service in a growing field.

To Mr. Thomas N. McCarter, president, we extend the greetings of the American Gas Association. This is an appropriate time we would like to go on record as thanking him and the officers and employees of his company for the splendid support they have given this Association.

At present we are fortunate to have the counsel of Mr. McCarter on our Executive Board, and since the formation of the A. G. A. in 1919 we have benefited greatly from the service on the Board and of most important committees of Messrs. P. S. Young, R. R. Young, Harlow C. Clark, and J. P. Hanlan. To list other Public Service men who have been active in A. G. A. affairs on this page would be impossible.

Because of this splendid support, our congratulations are especially hearty.

By ALEXANDER FORWARD,
Managing Director.

Mental Gymnastics—Raw Creation in Advertising Dept.

IT was nearly five o'clock in the evening, at the season of the year when flowers are supposed to tra-la.

Both of the copy writer's umbrellas were at the farther end of his daily trail, and the beautiful stenographer was hovering over the other fellow's desk.

Rush—comes an office memo from the boss: "EPS wants copy right away for some letters to be used by the salesman in Sleepy Hollow for low-consumption gas customers."

The copy genius, being a fiend for research and a whirlwind for action, analyzed the problem thoroughly and at 5:01 had produced three letters of varying appeal.

His first letter was hearty, bluff, friendly:

Dear Mr. Jackson:

How come long time you no use more than a dollar's worth of gas? What price dividends for our stockholders when everybody act like that? Now come across. Heat up your gas stove. Put in a radiant heater in your fireplace. Install a fifty-gallon tank for heating water and keeping it hot whether you need it or not.

We gotta have bigger and better gas bills to collect. Won't you help? It will cost you nothing to let us tell you how to make your gas bills bigger. Phone us today. Phone me. I'll give it my personal attention. I'll come out and you can feed me a gas-fired dinner.

Yours cordially,

His second letter was simple, direct, sincere:

Dear Mr. Jackson:

Will you kindly install a radiant heater, a gas furnace, a gas range, and a gas water heater? Also a heater in your garage and an incinerator in the basement? Our only interest in this is that we want greater consumption of gas on your premises. That makes you seem a more important citizen and makes our revenues greater.

Yours truly,

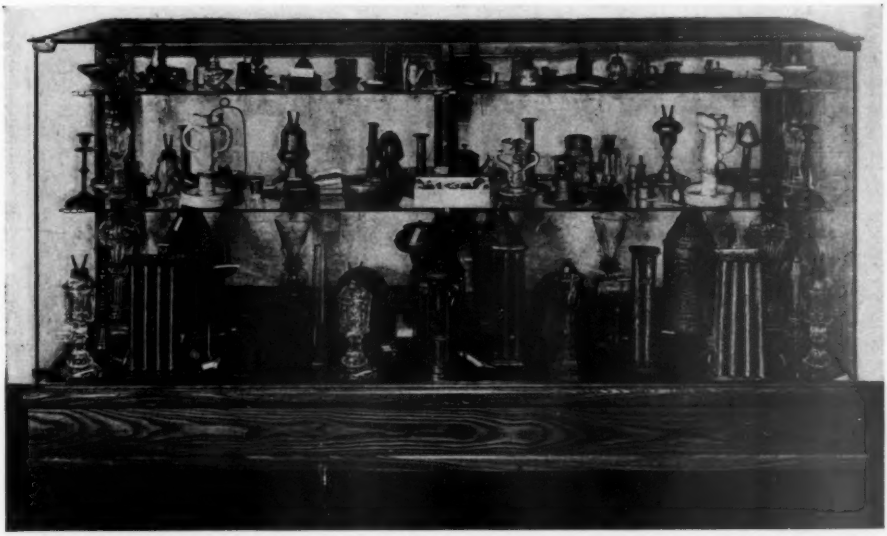
His third letter was positively erudite, of convincingly superior logic and all that:

Dear Mr. Jackson:

Our records show that your gas bills for the past year average only 81 cents per month. Don't you realize that you must use more gas, Mr. Jackson, all the time more gas? Thus you will enjoy the full benefit of the gas service which we have installed in your home at great expense—your expense. If you will use more gas, the ratio between the cost of your equipment and your upkeep will grow to be far more interesting than under your present low-consumption plan.

Yours truly,

Note: After this mental exercise, the copy genius was able to write three excellent letters and the gas consumption of Sleepy Hollow more than doubled. This was due either to his letters or to the fact that several popular widowers moved into town.—From *Printers Ink Monthly.*



"The Light of Other Days"—a unique collection of old lamps, made by the late Charles H. Nettleton, who was president of the New Haven Gas Light Co., New Haven, Conn.

Indianapolis Has Successful Blue Star Home

Thousands Visit Model Completely Gas-Equipped Home

THOUSANDS of Indianapolis people closely inspected the Blue Star Home which was opened on June 1 under the sponsorship of the Citizens Gas Co., according to Fred J. Rastenburg, secretary of the company.

"A full-page advertisement in the Sunday paper on June 3 was responsible for from 3500 to 4000 people visiting the home on that day alone," he says. "The vast majority of these people expressed great interest in all of the gas appliances, and especially in the refrigerator."

Indicative of the public interest in the completely gas-equipped home is the fact that the managing editor of the newspaper wrote the story for the paper himself, and went to considerable pains to secure correct data.

The house is equipped with a central house heating boiler, a water heater, a clothes dryer, a hot plate, a radiant heater, a range and a refrigerator, all gas-operated. The furnishings in the home are especially tasteful.

A well-planned advertising campaign under the direction of the Russell C. Stevens Agency announced the home to the city. The copy appearing in the full-page advertisement is as follows:

"An enduring structure of unique design, the Blue Star Home is a revelation in the possibilities of modern gas service. In it, your gas company shows in actual operation, under normal conditions, the numerous time, money, and labor saving devices that are possible in homes fully piped for gas service. Heating, cooking, refrigeration, water heating, and many other activities of the home are swiftly, silently and most efficiently accomplished with the tiny, magical blue flame . . . Gas.

"You will enjoy visiting the Blue Star Home . . . for here are things new and interesting to architects, contractors, artists, home-owners, lovers of homes and those planning to build."

The house was built by the Schoen-Morgan Co.

BOOK REVIEW

ECONOMICS OF ADVERTISING—*By Roland S. Vaile, Associate Professor of Economics, University of Minnesota—Published by Ronald Press Company—15 East 26th St., New York, N. Y.—$3.00.*

THE student of advertising, whether he be engaged in the production of advertising or merely interested in the profession, will find this volume of intense interest and value. Books on the psychology of advertising and on the mechanical features of advertising would if listed make an imposing bibliography, but there is a dearth of authoritative volumes on whether advertising pays, who it pays, and when it pays. Mr. Vaile in his book attempts to answer the questions.

That the author is well qualified and is talking from the standpoint of a man with experience is evident when one considers his contact with the sales problems of the California citrus industry for 12 years, and his present post at the University of Minnesota.

After presenting all the points of view on the economics of advertising, the author proceeds with the following: Advertising and Market Research; Advertising as an Educative Force; Advertising and Decreasing Costs; Advertising and Overhead Costs; Advertising and the Business Cycle; Some Long-Time Effects of Advertising on an Industry; and Advertising and Progress.

Those in the gas industry will be especially interested in Professor Vaile's references to standardization in view of the work now being conducted by the A. G. A. Testing Laboratory. He classified the advertisements in a well known weekly magazine for a month and found that while more than 50 per cent of the space was devoted to goods for which there are recognized objective tests of quality, only three advertisers made reference to standard comparative tests.

He also has some pertinent remarks to make on trade associations and the relatively new activity of these groups—cooperative advertising.

In discussing market research, Professor Vaile stresses adequate knowledge of the market. This chapter is most comprehensive, and, among other things, he says, "In other words, market analysis is a distinct phase of the marketing process; as distinct as advertising itself and often more important."

There is little doubt in the author's mind that the following is a truism: "It is now one of the minor functions of advertising to announce or give notice. Its major function is to persuade."

Prof. Vaile says that control is the essential element needed in advertising today, and he then proceeds to show what form that control may take.

The student of advertising will find this book a splendid addition to his library. It is extremely well written, and, by no means unimportant, is unbiased. All sides of every question are presented with the result that the author apparently has done what he tried to do: "present a sympathetic and impartial review of the data of advertising."

Aspects of Merchandising

(Continued from page 406)

3. Commission on Load Building Value of Appliances Sold

The last is a reward for hard work and acts as a stimulus to the salesman. The bonus, when paid at six months' intervals, becomes an important factor in reducing labor turnover. The specialty salesman must be highly qualified for his line of work. He should receive a larger salary and his commission rate be adjusted in accordance with the appliance he sells. In order to establish close cooperation between the territory and the specialty man, the territory man should receive a percentage of the commission to be paid, based on the load-building values produced by the specialty man. It is important that the outside sales representatives be supported by competent and well-trained inside sales people. Their compensation should be a salary, together with a certain commission on the prospects and business developed by individual effort. This plan encourages the territory men to induce customers to visit the display store. This results in more efficient sales operation and a larger volume of business.

The sales department should conduct itself so that the entire correlated organization lends assistance to the sales program.

Each person in an operating district must believe in the company, its policies

(Continued on page 446)

TIDE OF MEN AND AFFAIRS

G. S. Hawley

GEORGE S. HAWLEY, who has been vice-president and general manager of the Bridgeport Gas Light Co. since 1920, has been elected president of the company.

Mr. Hawley succeeds Frank M. Travis, who becomes chairman of the executive committee. Bradford G. Warner has been elected to the board of directors of the company, the only other change in the company's officers and directors.

Previous to 1920 Mr. Hawley was general manager of the Manufacturers' Association, of which he is now the president. He is also on the board of directors of the Bridgeport Hydraulic Company.

WILLIAM H. TAYLOR has been elected president of the Philadelphia Suburban-Counties Gas & Electric Company to succeed Arthur W. Thompson, who resigned to become chairman of the board. Mr. Taylor is also president of the Philadelphia Electric Company.

ALFRED HURLBURT, vice-president of the Equitable Gas Co., Pittsburgh, Pa., has resigned to enter the banking business. Mr. Hurlburt is a past member of the Executive Board of the American Gas Association.

F. R. Phillips has been elected to succeed Mr. Hurlburt. Mr. Phillips will carry on the duties of that office in addition to those of the other office he fills, that of vice-president and general manager of the Duquesne Light Company.

Frank F. Schauer, formerly general service manager, has been elected general manager of the Equitable Gas Company.

It was further announced that the general sales department and the general service department had been merged into one activity to be known as sales and service department, and that George E. Whitwell had been appointed manager in charge of this enlarged department.

ROBERT E. DAVIS has been made commercial manager of the Houston Gas and Fuel Co., Houston, Texas, succeeding Harry E. Danner. Mr. Davis has been connected with the company for many years.

BY unanimous consent of the academic senate of the Maryland Academy of Sciences, Herbert A. Wagner, president of the Consolidated Gas Electric Light and Power Co. of Baltimore, Md., has been awarded an honorary fellowship in the institution.

Only two others ever have received this honor. They were President Woodrow Wilson, and Cardinal Gibbons.

THOMAS N. McCARTER, president of the Public Service Corporation of New Jersey, Newark, N. J., has been elected a member of the board of directors of the Philadelphia Electric Company.

J. E. SPINDLE, general superintendent of the Grand Rapids Gas Light Company, Grand Rapids, Mich., was elected president of the Grand Rapids Engineers' club recently.

T. R. Weymouth

THOMAS R. WEYMOUTH, president of the Iroquois Gas Corp. of Buffalo, N. Y., has been selected to succeed R. C. Sharp, who has resigned as chairman of the board, president and general manager of the Oklahoma Natural Gas Corp., with headquarters in Tulsa. Mr. Weymouth is in Tulsa now and will familiarize himself with details of his new work and assume charge of properties and affairs of the company about July 1.

Mr. Weymouth is one of the outstanding natural gas men in the country. He is a director and member of the Managing Committee of the Natural Gas Department of the American Gas Association; is a member of the technical and research committee of that department, and has always taken a most prominent part in the affairs of the association.

As an executive, he has been confronted with numerous problems peculiar to the natural gas business and to the relation of that business with the communities being served, and he has gained wide prominence through his solutions of these problems.

The Oklahoma Natural Gas Corp. serves 53 cities and towns and operates 3,400 miles of pipe line in Oklahoma and Kansas. Recently it acquired the natural gas properties of the Oklahoma Gas & Electric Co.

Mr. Sharp came to Tulsa in 1917 from Pittsburgh, Pa., to accept an executive position with the Oklahoma Natural Gas Corp. and became executive vice-president, later being made president and general manager and more recently chairman of the board.

LEON J. PEPPERBERG, of Dallas, Texas, has been appointed consulting geologist for the Columbia Engineering and Management Company, with headquarters at Columbus, Ohio. He was formerly connected with the Nebraska Geological Survey and the U. S. Geological Survey.

JAMES B. McCABE has been elected president of the Municipal Gas Company of Dallas, Texas. Mr. McCabe was formerly vice-president and general manager.

J. H. MORGAN has been made local manager of natural gas distribution properties of the Oklahoma Natural Gas Corporation, at Oklahoma City, Okla. Mr. Morgan has been in San Angelo, Texas, where he was connected with a project now a part of the Oklahoma Natural Gas Corporation operation. Before going to San Angelo he was located at San Antonio, Texas, connected with the San Antonio Public Service Company.

W. J. REAGAN, formerly vice-president in charge of commercial activities of the Utica Gas and Electric Company, Utica, N. Y., has been appointed vice-president in charge of public relations. This change became effective May 1st.

FRANKLIN S. WADE, president and general manager of the Southern Counties Gas Company, Los Angeles, Cal., has announced the election of his associate executives, F. H. Bivens, A. F. Bridge, and M. R. Thompson to the positions of vice-presidents of the company.

Mr. Bivens was made vice-president in charge of public relations and sales, Mr. Bridge, vice-president in charge of operation, and Mr. Thompson, vice-president in charge of construction.

The election of Mr. Bivens in charge of public relations and sales is well deserved recognition of his services to the company. Bivens' entire business career has been spent in the gas industry. He has been active in the company since its inception in 1911, and during the past seventeen years has at various times been district manager of nearly all districts which the company serves. The past three years he has been in the general office of the company in the position of general agent.

A. F. Bridge is an executive engineer widely known throughout the gas industry. He became associated with the company at the conclusion of the War in 1919. From 1913 to 1917 he was an assistant engineer of the California State Railroad Commission in charge of its supervision of gas property in the entire state.

M. R. Thompson is recognized as one of the leading engineers in the utility field on the Pacific Coast. Thompson has been chief engineer for many years, beginning his public utility career with the company since 1911, having been in charge of all construction throughout the development of the utility.

Messrs. Bridge and Thompson are recognized as the engineers who have developed and put into practical operation the high pressure type of gas storage holders now extensively used in Southern California.

H. D. SAVAGE, president of the Dry Quenching Equipment Corporation, has announced the election of D. W. Wilson as vice-president and general manager.

Mr. Wilson has been intimately associated with the coke oven and gas industries for many years. He has been active in the work of the Carbonization Committee of the American Gas Association and has contributed various technical papers and articles relating to the subject of this committee's work. His previous identifications have been with the Wilputte Coke Oven Corporation and the Iroquois Gas Corporation. He was also assistant professor of chemical engineering at Massachusetts Institute of Technology.

ROBERT H. PATTERSON is to succeed Frank A. Woodhead as manager of the Arlington Gas Light Co., Woburn Gas Light Co., and the Lexington Gas Co. Mr. Patterson's succeeding positions were as superintendent of the Worcester Gas Light Co., and superintendent of the Adams, North Adams, and Williamstown gas companies.

T. R. KERR, engineer of gas measurements and gas distribution of the Columbia Engineering and Management Corporation, has been elected a vice-president and director of the Columbus Operating Group of properties of Columbia System.

JOHN K. SWANSON, district manager of the Consumers Power Co., Saginaw, Mich., has resigned that position to become vice-president and general manager of the Minneapolis Gas Light Co., Minneapolis, Minn.

Mr. Swanson entered the employ of Consumers Power Co. in 1912, in Saginaw as a meter reader and clerk. A year later he was transferred to Bay City as chief clerk, and in 1914 was promoted to the Jackson district as chief clerk.

In 1916 Mr. Swanson was named secretary of the Michigan Light Co. and assistant secretary of Consumers Power Co. In 1919 he was named district manager at Jackson.

In 1924 he went to Saginaw in the same capacity. He has been active in the Saginaw Board of Commerce, having been elected a director in 1926, and president in 1927.

JOSH A. GOODMAN has resumed managerial duties of the Concord-Annapolis Gas Company, effective June 1, succeeding Charles A. Haggerty, who has been promoted to the management of the Consumers Gas & Coke Company, Waycross, Ga.

Mr. Goodman was formerly manager of the Concord utility. About a year ago he was transferred to the Rome, Ga., Municipal Gas Company.

JOHN B. WYNNE, who entered the employ of the Philadelphia Gas Works, Philadelphia, Pa., in 1900 as a clerk in the storeroom, Manayunk District, and who for the past five and one-half years has been a special representative, Hotel and Restaurant Division, New Business Department, resigned on March 15, to accept a position as eastern representative for the Michigan Stove Company, Detroit, Michigan. For the present, Mr. Wynne will make his headquarters in Philadelphia.

H. C. Blackwell

H. C. BLACKWELL, formerly president of the Union Gas & Electric Company, Cincinnati, has been named president of the new Cincinnati Gas & Electric Company, the organization resulting from the merger of the Columbia Power Company, the Cincinnati Gas & Electric Company and the Union Gas & Electric Company. Mr. Blackwell is well known in national engineering circles, both as an executive of long standing of electric light and power companies in the Middle West and as an officer in the representative engineering societies. His early connections included the Wabash Railroad Company, J. G. White & Company and the People's Light Company at Davenport, Iowa, advancing in the last-named company from engineer to the position of vice-president and general manager. As vice-president and general manager of the Kansas City Power & Light Company in charge of construction and operations, he was closely identified with the Kansas City development, one of the most successful of the larger electric enterprises in the country.

In 1924, Mr. Blackwell removed to Cincinnati to become vice-president in charge of operations of the Union Gas & Electric Company, succeeding W. W. Freeman as president two years later.

A. W. Robertson

A. W. ROBERTSON, president of the Philadelphia Co., Pittsburgh, Pa., has been elected a member of the Board of Directors of Chamber of Commerce of the United States.

Mr. Robertson will represent Transportation and Communication.

CHESTER J. EATON, general commercial manager, Middle West Utilities Co., Chicago, Ill., has been elected vice-president in charge of merchandising. Mr. Eaton entered the public utility field in Kentucky, and was affiliated with several subsidiaries of the Middle West company before joining the parent company.

THE Surface Combustion Company announces the following change in their Boston District office:

Eugene A. Weaver, formerly of the home office, is being transferred as district manager of the Boston office to fill the vacancy caused by the resignation of L. B. Crossman.

Mr. Crossman has accepted a position with the Boston Consolidated Gas Company in charge of industrial and other commercial activities.

A. G. STRICKROTT, formerly Safety Director and Editor of the *Synchronizer*, employees' magazine of the Mohawk Hudson Power Corporation system, has changed his office from Schenectady to Albany, N. Y., the headquarters of the company.

With this change he has been relieved of the duties of safety director and will engage in public relations and publicity work under A. N. Woodhead, retaining also the editorship of the *Synchronizer*.

Mr. Strickrott is a member of the Accident Prevention Committee of the American Gas Association and a former Secretary of the Employees' Magazine Section of the National Safety Council.

SAMUEL E. WOLFF, consulting engineer, has disposed of utility interests in the East to become president of the Oklahoma Power & Water Co., with headquarters in Sand Springs.

Mr. Wolff has had many years' experience in public utility operation in the East and in the Middle West, particularly in Michigan, where he was born and where he was identified with the properties now units of the Consumers Power Company. After serving in various de-

partments he resigned as general manager of the Jackson (Mich.) Gas Company to take a similar position in charge of the gas, electric and railway utilities in Saginaw and Bay City, Mich. In 1908 he joined the New York executive staff of Hodenpyl, Hardy & Company, and continued with them until the end of 1921, when he engaged in industrial work for New York bankers.

George W. Doane Dies

G. W. Doane

GEORGE WHITE DOANE, chairman of the Board of Trustees of the New Amsterdam Gas Company, New York, and prominently identified with the gas industry for fifty-five years died suddenly recently on a railroad train while on his way from his home at South Orange, N. J., to his office. He was in his seventy-fifth year.

Until Jan. 10 last Mr. Doane was president of the New Amsterdam Gas Company, the Northern Union Gas Company, the Central Union Gas Company and the East River Gas Company of Long Island City. He resigned all these presidencies on that date but still continued his active interests in his life work.

Mr. Doane was born in Atlanta, Ga., Dec. 13, 1853, and came to New York at the age of eighteen, working first for the Brooklyn Gas Light Company, predecessor of the present Brooklyn Union Gas Company. He went back to Atlanta, but in 1873 returned to New York and became identified with the New York Gas Light Company, the city's first gas company, of which he became secretary and treasurer, holding that position until 1884, when the company became a part of the Consolidated Gas Company of New York. When the late Harrison E. Gawtry was elected president of the Consolidated Gas Company, Mr. Doane was appointed treasurer, and served in that office until 1903. That same year he was elected president of the Northern Union Gas Company and the New Amsterdam Gas Company and vice-president of the East River Gas Company of Long Island City.

In Memoriam

James J. Gordon, The Public Service Electric and Gas Co., Jersey City, N. J.

J. C. Brady, Consolidated Gas Co. of N. Y., New York, N. Y.

Chicago Family Has 125 Years Service with Gas Company

ONE hundred and twenty-five years of service is the record of the Maroney family as employees of The Peoples Gas Light and Coke Company, Chicago. This record of a century and a quarter of service by one family with one company is believed to be unique.

It started with Dennis Maroney, who was employed in 1866. He is now 81 years old and is retired on a pension with 46 years' service to his credit.

One of his sons, Thomas, started as a clerk in 1888, and is now pensioned with 38 years' service. Another son, William, is serving his thirty-ninth year, and he has a son, Harold, who is finishing his third year of service with the company.

They are unanimous in saying that there will be Maroney "gas men" when, as they confidently believe, gas will be used generally to heat homes and larger buildings, and to take over most of the heating that is now done with coal.

William H. Marshall Is Dead

W. H. Marshall

WILLIAM H. MARSHALL, vice-president and treasurer, Philadelphia Gas Works Company, Philadelphia, Pa., who for 41 years had been an important figure in the gas business, died suddenly June 11. Death was due to heart disease. He was sixty-four years of age.

Mr. Marshall was born in Philadelphia on March 18, 1864. He entered the employ of The United Gas Improvement Company in May, 1887, in the accounting department. When the City leased the Gas Works to The United Gas Improvement Company in 1897, Mr. Marshall was made cashier of the Philadelphia Gas Works and in 1909, in addition to that position, he was appointed assistant secretary of the U. G. I. Company. In April, 1912, he was appointed comptroller of the Philadelphia Gas Works and assistant to the third vice-president of the U. G. I. On January 1, 1928, when the new U. G. I. lease of the Philadelphia Gas Works became effective and the lease was assigned by U. G. I. to the Philadelphia Gas Works Company, Mr. Marshall was elected vice-president and treasurer of the latter company. He was the fourth oldest employee in point of service of The United Gas Improvement Company.

Affiliated Association Activities

Illinois Gas Association

PRESIDENT J. A. STRAWN of the Illinois Gas Association has appointed the following representatives to serve on A. G. A. Sectional Managing Committees for the year commencing October, 1928:

Accounting, R. N. Dreiman of Aurora; Industrial Gas, D. W. Chapman of Chicago; Manufacturers, F. H. Foster of Chicago; Publicity and Advertising, B. J. Mullaney of Chicago; Technical, H. E. Bates of Chicago; and Commercial, M. L. Harry of Decatur.

Indiana Gas Association

THIS Association, which met in Indianapolis May 24 for its annual meeting, elected the following officers:

President, T. J. Kelley, of the Northern Indiana Public Service Company; vice-president, C. L. Kirk, of the Citizens Gas Company; and secretary-treasurer, F. B. Tracy, of the Central Indiana Gas Co., Muncie, Ind.

Directors elected to serve three years are: T. S. Kemp, R. S. Brunner, and William Insull. The following were elected to serve as directors for two years: I. L. Oppenheimer and B. H. Gardiner.

Michigan Gas Association

THE tentative program for the annual meeting of the Michigan Gas Association, to be held at the Grand Hotel, Mackinac Island, Mich., July 5, 6 and 7, was announced in the June issue of the MONTHLY. Sufficient information was given to indicate that this meeting will be of the utmost interest to gas men and should attract a large attendance. Reservations should be made direct with the Hotel.

Mid-West Gas Association

AT the recent convention of the Mid-West Gas Association the following members were elected to serve as representatives on the A. G. A. Sectional Managing Committees for the year commencing October, 1928:

Commercial, V. O. Stafford of Davenport, Iowa; Industrial Gas, C. F. A. Schuldt of St. Paul, Minnesota; Manufacturers, R. J. Canniff of Chicago, Illinois; Publicity and Advertising, R. R. Rand of Minneapolis, Minnesota; and Technical, John M. Drabelle of Cedar Rapids, Iowa.

Pennsylvania Natural Gas Men's Association

AT the recent convention of this Association, the following officers were elected:

President, George W. Ratcliffe, Pittsburgh; vice-president, Geo. H. Whitwell, Pittsburgh; sec.-treas., E. J. Stephany, Pittsburgh.

R. A. McNees, San Antonio Public Service Co., was elected first vice-president and chairman of Gas Division of the Southwestern Public Service Association at the recent Dallas convention

Oklahoma Utilities Association

THE following representatives have been appointed by President L. W. Scherer of the Oklahoma Utilities Association to serve on A. G. A. Sectional Managing Committees for the year commencing October, 1928:

Accounting, J. R. Abercrombie of Kansas City, Mo.; Commercial, J. R. Gaugler of Ponca City, Okla.; Manufacturers, H. L. Montgomery of Bartlesville; Technical, T. R. Weymouth of Tulsa; and Advertising and Publicity, E. M. McKay of Oklahoma City.

Pacific Coast Gas Association

THE general convention committee for the Pacific Coast Gas Association convention, scheduled to open at the Hotel Del Coronado, Coronado, California, is already very much on the job. Highlights of the convention will include a speaking contest, and advertising exhibit, and an industrial display, featuring mechanical specialties as well as the latest gas appliances.

The personnel of the committee in charge includes: C. D. Weiss, Chairman; W. A. Lambert, hotel accommodations; Alfred May, registration; W. E. Frazier, transportation; R. C. Cavell, entertainment; W. M. Thompson, golf; D. L. Scott, luncheons; Wm. DeWaard, banquet; F. M. Raymond, publicity; D. H. Perkins, exhibits; Ruth Creveling, convention magazine, and Mrs. L. M. Klauber, women's entertainment.

Copies of Charts Available

LARGE copies of the charts used in the article, "Flow of Gas Through Orifices," by C. George Segeler, in the April issue of the MONTHLY, are available at $.15 each.

Address requests to the American Gas Association, 420 Lexington Ave., New York, N. Y.

Cover page of new booklet of interest to home builders

Book for Home Builders Is Proving Popular

THE new booklet of the Commercial Section, entitled "Hints for Greater Comfort in Your Home," is enjoying great popularity among the gas companies of the United States. More than sixty companies have ordered copies and a great many other companies have requested samples.

The book is an especially attractive one designed to be presented to prospective home builders by local gas companies. It has already been proved that the book is very effective in promoting the sale of a more complete installation of gas appliances.

The booklet is prepared in loose-leaf form with a four-color illustration on the cover. It is designed so that it can be presented personally to the home builder by a representative of the gas company. Suitable space is provided for imprinting the company's name and for writing the name of the prospect on the title page. There are individual pages for pasting the manufacturer's mailing piece on particular appliances recommended for the home. Special pages cover the gas range, water heater, fireplace heater, central house heating appliances, refrigerator, incinerator, and domestic laundry appliances.

The booklet, "Hints for Greater Comfort in Your Home," at the price of $25.00 per hundred copies.

Second National Fuels Meeting to be Held in Sept.

THE second national fuels meeting arranged for American engineers interested in the use and conservation of fuels by the Fuels Division of the American Society of Mechanical Engineers will be held at the Cleveland Hotel, Cleveland, Ohio, Sept. 17 to 20.

The program will be divided as follows: General, Fuel Characteristics, Industrial, Marine, Power Plant, Pulverized Fuel, Railroad, and Smoke Abatement.

Among the papers to be presented are:

"Possible Avenues of Productive Research on Coals," by F. R. Wadleigh, consulting engineer, New York, N. Y.

"Relative Values of Solid, Liquid, and Gaseous Fuels," by J. T. Ward, Mass. Inst. of Tech., Boston, Mass.

"Constitution and Classification of Coal," by A. C. Fieldner, U. S. Bureau of Mines.

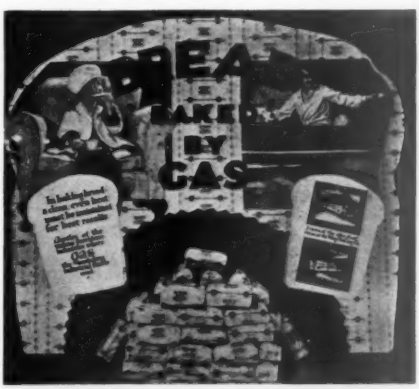
"Fuels and Their Flame Characteristics with Reference to Combustion Values and Furnace Space Requirements," by Henry Kreisinger, Combustion Engineering Corp., New York, N. Y.

"Industrial Furnace Efficiency Economic Considerations," by Jas. H. Herron, Cleveland, Ohio.

"The Measurement of Atmospheric Smoke Pollution," by A. S. Langsdorf, Washington Univ., St. Louis, Mo.

"Problems and Methods in Smoke Abatement Work," by H. K. Kugel, Deputy Smoke Commissioner, Cleveland, Ohio.

"Damage Due to Smoke and Smoke Abatement Methods," by H. B. Meller, director, smoke abatement research, Mellon Institute of Technology, Pittsburgh, Pa.



Window display of Providence, R. I., Gas Co., stresses bread baking by gas

NATURAL GAS DEPARTMENT

S. W. MEALS, Chairman H. C. MORRIS, Vice-Chairman

High Spots of Department Activities

New and Important Projects Are Started; Announcements of Interest to All Members

NEW and important activities of the Natural Gas Department for the coming year are now well under way. A meeting of the Managing and Advisory Committees was held at Atlantic City, N. J., on June 1, with S. W. Meals, chairman, presiding.

One significant step is the decision to appoint a committee on natural gas statistics. The value of adequate statistics was emphasized in several speeches at the Dallas convention, and the appointment of a committee will undoubtedly stimulate greater interest in this vital activity.

Mr. Meals will also appoint a special committee to consider the manner of using the proceeds of the fund received from the Natural Gas Supplymen, Inc. Announcement of the personnel of this committee will be given in an early issue.

The newly appointed Executive Committee consists of J. D. Creveling, J. B. Corrin, T. B. Gregory, J. G. Pew, A. W. Robertson, and S. W. Meals, ex-officio. This committee was appointed by the chairman of the Department, and ratified by the Managing Committee at the Atlantic City meeting.

A special committee to consider future meetings has been chosen, and R. W. Gallagher, J. D. Creveling, and T. B. Gregory are members. A report from this committee is expected in the early Fall.

William C. Grant, of Dallas, Texas, has been appointed secretary of the Southwest Division of the Natural Gas Department. Mr. Grant has been acting secretary since the death of George McQuaid. He is now on an extended tour of the Southwest.

The technical work of the Department is progressing under the leadership of H. C. Cooper. The Main Technical and Research Committee is starting to gather information on and survey the subject of pipe coverings, and is also doing similar work on the methods of taking the open flow capacity of gas wells.

H. S. Bean, chief of the gas measuring instrument section of the Bureau of Standards, Department of Commerce, left for Buffalo recently to take charge of the cooperative investigation of the Bureau of Standards, the Bureau of Mines, and the Natural Gas Department on methods for measuring large volumes of gas.

The program for the coming summer includes an elaborate series of tests on pipe lines of different diameters and with various sizes of meters. These tests will be made to check some of the previous results, and it is expected also that data will be obtained for higher pressures than any so far used in the work. In addition some tests will probably be made at a location other than Buffalo, where gas pressures of at least 350 pounds per sq.in. are available.

A. W. Lee Heads Aero Club

A. W. Lee, general superintendent of the Louisville Gas and Electric Co., Louisville, Ky., has been elected president of the Aero Club of Kentucky.

W. Sidney Park and H. L. Gentry, also with the Louisville company, were elected secretary-treasurer and director, respectively.

Resolutions Passed at Dallas Convention

Important Convention Action Taken at Recent Meeting

THE following are the resolutions passed by the Dallas convention of the Natural Gas Department of the A. G. A.:

"RESOLVED, That this convention heartily endorses the research work in gas measurement and in pipe line flow, so ably conducted under the leadership of Chairman H. C. Cooper, and recommends to the Managing Committee the continuance and, if advisable, the enlargement of this important undertaking."

"RESOLVED, That it is the sense of this convention that much of the past year's success is due to the tireless efforts of Mr. McGowen, and the Association hereby expresses its deepest appreciation to him for all the time and effort he has given to make this year such a marked success.

"RESOLVED, further, that the department heartily approves Mr. McGowen's condemnation of unsound promotion schemes and his recommendation that such data be collected and compiled at Association Headquarters as will enable the Association to promptly inform the public and public officials of the true situation regarding unsound promotion schemes, should occasion arise.

"We recommend the approval of Chairman McGowen's address and commend it to you for careful study."

"RESOLVED, That the Natural Gas Department endorse the work of the Appliance Testing Laboratory of the American Gas Association in Cleveland, and urge upon all its members the importance of stimulating the sale of only laboratory-approved domestic gas burning appliances, the American Standard of Safety."

"This convention could not possibly be complete without official recognition of those, who, through their ability and aptness have guided the department on its course during the past year, or without official appreciation for all who have worked to make this convention a success.

"We feel it is a privilege, as a committee of your organization, to express in behalf of the Department heartfelt appreciation for all the splendid work accomplished through the organization's chairman, N. C. McGowen, and all of the other officers and officials of the Department.

"To the City of Dallas, whose able Mayor welcomed us, to the Dallas Chamber of Commerce, the press, the hotels, the Fair Park organization, the various local people who gave their time without stint, to the gas companies of this locality, their officials and employees, to the supply men and other exhibitors, and to all the great number whose cooperation have given us a very happy, instructive, and successful convention, we should express our thanks.

"Special note should be taken of the large amount of newspaper publicity given the convention and the association, not only in Dallas, but throughout the country, through the work of the Southwestern Secretary, W. C. Grant, and we express our appreciation to all those responsible for this excellent showing.

"The splendid work of Managing Director Forward and his able staff from Headquarters in New York and Dallas, who have labored on the numerous details of the meeting should be brought to the fore, and special mention should be made of the work of the committees on arrangements, exhibits and papers, and all other committees.

"It is impossible to mention by name all of those to whom our thanks are due for this, the largest Natural Gas Convention we have ever held; therefore, in closing, we would collectively extend to all an expression of appreciation and gratitude from the Natural Gas Department, with best wishes and hearty cooperation to the incoming administration.

"THEREFORE, BE IT RESOLVED, By the Convention here assembled, that we hereby express our thanks and appreciation to all those mentioned in the foregoing, who have contributed to the success of the convention, and all who have so greatly benefited the Natural Gas Department and the natural gas industry of America, during the preceding year."

J. M. Coles Dies

J. M. COLES, who had been connected with the General Gas Light Co. for the past 25 years, as sales representative in New York City, died recently following an operation. He had just returned from the Dallas convention of the Natural Gas Department.

Interesting Developments in Gas Pipe Joints

A Discussion of Some of the Problems Facing the Distribution Engineer Today

By HARRY Y. CARSON
American Cast Iron Pipe Co.

THERE was a committee appointed about six years ago known as the Technical Committee of the Southwestern Public Service Association headed by F. C. Armbruster, vice-president and general manager, Southern Cities Distributing Co., Shreveport, La. A definite program of research was mapped out by this committee, and it would be a very good thing to read a part of the plan outlined for study and then to discuss what has been done on that plan up to the present and also project some new problems that probably are worth while for future study.

The committee report given at the 1926 meeting in Galveston had this statement:

"In the search for knowledge that can be definitely applied to gas distribution problems, particularly in the Southwest, your committee has been impressed with the thought that each weak link should be singled out for definite study. Leakage surveys have repeatedly revealed that much of the unaccounted for gas is lost, first, from defective joints and, second, from corroded or defective house services.

"The joint situation is very pronounced where manufactured gas distribution systems are converted to natural gas. It is not unusual to find every joint in an old system defective to a greater or less degree.

"Your committee made out a program for study, using rubber rings in B & S joints, embracing: (a) History of rubber compounds; (b) Physical properties of rubber compounds; (c) Description of tests with rubber rings; (d) How long will rubber last in B & S joints?"

Another item singled out for study was the use of jute, hemp, and flax in B & S joints. Tests of these materials were made and the problem of the effect of "wet" and "dry" gas on jute, hemp, and flax was considered. Whether braided jute or loose jute is preferable, and how long may jute be expected to last in the joints were some of the pertinent questions which the committee undertook to solve.

For about a century gas joints have been made of uncertain materials. When cement joints came into more general use, it was found that any yarn which had a large amount of oil or tar in it could not be used because that would lubricate the sides of the cast iron pipe or bell and prevent the cement sticking intimately to those surfaces. So the practice grew up of specifying absolutely dry yarns. I have seen a great many samples of what were supposed to be high grade dry yarns, and by analyzing found them to contain at times ten different ingredients, including cotton sweepings and rotted rope fibers, evidently mixed in some foreign port and sold in some instances at a price entirely too high.

The U. S. Bureau of Standards test consists of subjecting these packing materials to a mixture of acids which changes them to different colorings. Pure jute comes out a certain coloring, pure hemp comes out a slightly different coloring, and so on.

Looking further into a study of the life of these different plant fibers, I find that it depends upon how much cellulose is in the fiber. Cellulose is broken up chemically by certain hydrocarbons, such as benzol. However, jute and flax fiber is neither rapidly destroyed by oxygen nor the action of the hydrocarbons. It is interesting to trace back historically in our study of some of these materials. The ancient Egyptians apparently knew a great deal about this matter when they wrapped their mummies in the finest of flax and jute fiber linen that could be ob-

Presented at annual meeting of Southwestern Public Service Ass'n.

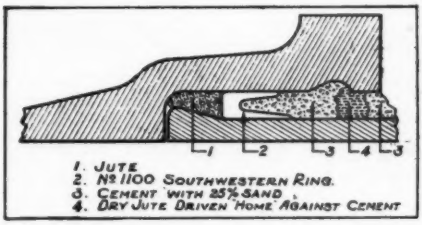


Fig. 1—Cross section of rubber ring and cement combination

tained because they wanted that linen to last ten thousand years, at which time the mummy was supposed to come to life and have some clothing. They knew that whenever these linens were adulterated with material such as sisal, cotton, or ingredients from plants of other fibrous nature, they would disintegrate in time. They knew these fibers had the power also to resist the hydrocarbons such as asphalt which they put on them. Certain asphalt beds produced a kind of pitch which was used to preserve the mummies and their clothing against bacterial attack. They knew that only the jute fibers and the flax fibers would definitely resist that action. It is not usual that we can go that far back in history of common materials.

Walter Hole, prominent gas engineer of England, in the discussion of rubber rings, and in forming an estimate of the life of rubber rings in B & S joints, shows that such rings have been in successful use 50 to 60 years. He obtained some rubber rings from old joints and made tests on them to determine the effect of various ingredients of coal gas on them.

Knowledge of the pipe joint rubber rings was brought to this country in the late 80's and early 90's when use of that knowledge was made by producing the rings for Dresser joints. Within the past few years we have had an opportunity to compare the rings made in this country with those produced in England and Germany more than 50 years ago, and have found they correspond very closely. There has been no marked change in the general make-up of the rings. It is easy to see why there should not be any change as these rubber rings were simply produced for the purpose of being put under compression in the joint, and not for the purpose of stretching to any great extent. Therefore, it is necessary that there be only a relatively small amount of rubber used in the compound that is used for manufacturing such rings. Quite a number of inorganic materials are mixed very thoroughly with the raw rubber. Baking the compound at a certain temperature and for a certain length of time fixes the rubber molecule. In studying the rubber molecule we find some of the most interesting things from a mechanical standpoint that can be found in engineering. Chemically the rubber molecule never has been defined definitely. But from a purely physical standpoint it affords one of the most fascinating studies in modern research. Now one strange thing about the rubber molecule is that it can actually stretch itself by absorbing other smaller molecules, such as some hydrocarbons, without in any way destroying itself physically. It can absorb or take up other molecules, then give them up and return back to its original physical condition. These facts are brought out very thoroughly in tests Walter Hole made some years ago and reported in the *Gas Journal* (London) of Nov. 21, 1923, and in *Gas Age-Record,* Jan. 31, 1925. American made rubber rings are scientifically compared to the old rubber rings found in joints made 50 or more years ago. A thing of interest here is that the modern rubber rings reacted to coal gas ingredients in approximately the same way that they did with the old rubber, thereby showing there are no real differences in the materials.

With some basic ideas of jute and rubber definitely before us it became a mechanical problem simply to make use of that information in designing proper joints for natural or any other gas, so that the swelling action would cause

tightness with age, rather than shrinkage. We found by tests and by experience when we used an ordinary follower gland bolted up against a rubber ring that the swelling rubber rings exuded out between the gland and the pipe. Mechanically it is impossible to get a tight fit, even though machining be resorted to, because in the effecting of a tight joint with a gland, it seems necessary in practice to make suitable allowances for the fitting of the metal parts, and proper machining is prohibitive in cost. Rubber, strange to say, has almost no compressibility. When subjected to high pressure, it acts like fluid and will move into very small interstices.

These factors are some of the interesting things which we must take into consideration when properly using rubber in the construction of gas joints.

Joints utilizing rubber rings have been most extensively made with lead confining the rubber ring, but we are learning that cement really constitutes one of the best confining mediums for rubber rings. Cement properly driven (see Fig. 1) gives sufficient pressure against the rubber ring, so I think these discoveries will continue to be of great value to gas distribution engineers.

The future of the manufactured gas business promises to present the same problems of leakage as now face the distribution engineer of the Southwest.

A joint that is leaking is usually leaking because of faulty workmanship or faulty material. Usually a bell and spigot joint constructed of old style material will be found to have either inferior material or inferior workmanship or both. The placing of dry natural gas on the line has caused two things to happen to the old style yarn; one is the moisture is entirely absorbed by the passing of dry gas through the line and shrinkage occurs; the other is that the disintegrated portions may pass into the pipe. Tests made on old yarn taken out of joints at Natchez, Miss., 70 years in use, showed a reduction in volume of approximately five per cent took place when the yarn was subjected to a current of hot, dry air. Some such action clearly takes place when dry gas is turned into the mains. The use of the so-called leak clamp can only be temporary because in placing leak clamps on the joint the best that can be done is to calk the lead back a slight distance and place a rubber ring on the outside of the bell against a very small portion of the cast-iron lip on the bell, followed up with the clamp. The rubber thus placed is subject first to hardening from the air contained in the soil, and second, is subject to softening due to the contact of gas from the inside, which simply escapes up over that small ¼th or ⅛ inch surface where the rubber is temporarily holding. The rubber ring thus exposed

inevitably expands itself and will soon leak. I believe the maximum useful life of leak clamps on B & S joints cannot be over ten years. If nothing else happens to the rubber ring, the bolts can loosen and destroy the efficiency of the joints.

It has been found that it is not a difficult thing to cut lead or cement out of any existing B & S joints, place a suitable rubber ring back in the bell and lastly put confining materials, such as lead or cement, on top of the rubber ring and in that way construct the joint in place on the existing main at a lower cost than the placing of leak clamps, thereby making a permanent repair. A machine has been designed to remove lead and cement from joints quickly. I think at present there are many such machines in almost daily use in different parts of the Southwest, taking out old material for the purpose of replacing with new materials. Such repair work is carried out after the lead or cement is removed by placing a strand of braided jute back in the bell. After the jute is put in place a coil of rubber is used to form a suitable ring. That ring is made by placing the specially formed rubber strip wrapped two or three times around the pipe and followed by a round rubber strip designed to hold the ring thus formed in proper form to be calked firmly in place by lead or cement—etc. When cement is used for calking the rubber ring, a surprisingly flexible joint is made. Contrary to ordinary cement joints, the cement acts simply as a gland to confine the rubber perfectly. Moreover, I feel that these studies with cement should be considered from the standpoint of economy and electrolysis mitigation.

Experience with leak clamps has been very bad. From all information we have gathered, especially with natural gas, on the life of the leak clamp, the longest life I have ever heard of is ten years. So it would not be a very good proposition in my opinion to put down expensive equipment to last from two to ten years and then have to replace it. It has been definitely found that old materials in 4" B & S joints can be reconstructed for 71¢ compared with $2.12 for the clamp, so that the cost alone is very much in favor of this newer method of doing the work.

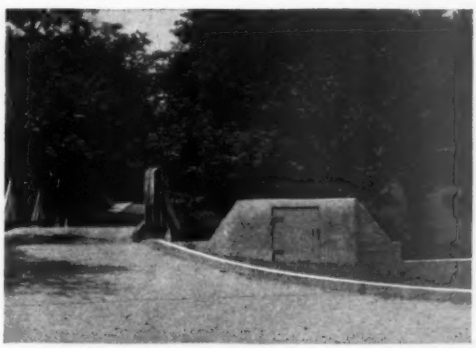
From a purely mechanical viewpoint, suitable pure braided jute, suitable rubber rings, and most of all proper workmanship in the placing of these materials in cast-iron B & S joints should provide all that is necessary to the gas engineer who wants to construct on a safe basis.

Midwest Industrial Council Meets on July 27

THE summer meeting of the Midwest Industrial Gas Sales Council will be held at the Palmer House, Chicago, Ill., on July 27, at 10:00 a.m., according to announcement of C. B. Mershon, secretary.

Round-table discussions on the following will be given:

Enameling, by Hale G. Clark; Gas in the Studebaker Plant at South Bend, Ind., by C. H. Lekberg; Industrial Sales, by D. Campbell.



Neat and attractive low-pressure regulator house of the Natural Gas Co. of West Virginia, Wheeling, West Va., in the suburb of Woodlawn. Residents of the town have complimented the company on the construction as an improvement to the landscape effect of Woodlawn

ACCOUNTING SECTION
EDWARD PORTER, Chairman F. H. PATTERSON, Vice-Chairman
H. W. HARTMAN, Secretary

Telautograph Speeds Service at Reading

By FRANK P. LAMB
Superintendent of Distribution, Consumers Gas Company, Reading, Pa.

RECOGNIZING promptness as an essential element of good service, a telautograph system was recently installed at Reading to reduce the time necessary to handle calls for service received at the main office. One machine was installed on the order counter at the office, and a similar machine was located at the dispatching clerk's desk in the distribution shop, the generator unit for each machine being installed in the basement of the respective buildings. Both are sending and receiving machines, and record simultaneously any writing at either location. Each instrument is equipped with a spring roll to wind the tape after it has passed through the machine.

At the beginning of the day the tape is dated, and orders placed thereon are numbered consecutively. In addition, a code system is used to designate the type of order—leak, meter, etc.—which results in an elimination of excessive writing.

WHAT THE TELAUTOGRAPH DOES

Prior to the installation of the system, orders received at the office, with the exception of leak orders, were written in longhand on various colored forms, and collected and sent to the distribution shop three times daily. Consequently, two to three hours might elapse from the time a complaint was made until it was received by the orderman on the street. Leak orders and specials, requiring immediate attention, were telephoned direct to the dispatcher. The ordermen report in the shop each morning, noon and night, and, in addition, call the dispatcher four times daily, twice in the morning and twice in the afternoon. When the telautograph records an order it is immediately routed by the dispatcher and given to the orderman on his next call. Thus the speed of service is increased without any special request of the consumer.

The installation of the telautograph system was accompanied by the purchase of a billing machine, and as the orders appear on the tape of the shop telautograph they are immediately typed. With the use of this machine it is proposed in the near future to adopt a new form of order slip to replace the many-colored slips now in use to designate the different types of orders.

THE BENEFITS

With the telautograph and the billing machine, the dispatcher does not receive a large number of orders at one time, and the work is more evenly distributed to the orderman during the day. As the orders are recorded the dispatcher may readily see when any district is requiring more attention than one man can give it, and to eliminate time lapse between the receipt of work by the orderman and its completion, some of the orders may be assigned to men from adjacent districts.

Telautograph recording is far more legible than long-hand pencil writing, which is often rubbed by repeated handling to such an extent that it is difficult to understand, and its use results in a reduced number of telephone calls between the office and the distribution shop, leaving the telephone available for other calls.

Reading has demonstrated that delays are eliminated and service is speeded up by the use of the telautograph, thereby promoting good will on the part of the customer toward the utility.

U. of P. Will Offer Course in Fuel Engineering Again

THE course in fuel engineering which was offered for the first time last year at the Towne Scientific School of the University of Pennsylvania will be offered again in 1928-1929. This course is given by the Mechanical Engineering Department and leads to the Degree of Master of Science in Fuel Engineering.

The course at the U. of P. will be a comprehensive and practical one embracing: Fuel Resources; Mining Methods: Preparation for Market; Distribution Storage and Re-handling; Composition and Combustion of Fuels; Uses of Fuels and Specifications for Purchase; Furnaces; Fuel Sampling, Analysis and Calorimetry; Fuel Testing in Heating and Power Appliances; Domestic Heating, Cooking, Smoke Elimination; Regulations Affecting Use of Water Power and of Fuel Resources; Research; Electives.

Robert H. Fernald, director of the course in fuel engineering, is absent on leave for the University year and the acting director will be William H. Kavanaugh, M.E., professor of experimental engineering, mechanical engineering department.

Among those who will lecture are the following:

Bauer, E. H., manager, Worcester Gas Light Company, Worcester, Mass.

Boyd, A. M., engineer of gas distribution, The United Gas Improvement Contracting Company, Philadelphia, Pa.

Conner, R. M., director, American Gas Association Testing Laboratory, Cleveland, Ohio.

Cornish, R. C., engineer, The United Gas Improvement Company, Philadelphia, Pa.

Fieldner, A. C., chief engineer, Experiment Stations Division, Bureau of Mines, Washington, D. C.

Fulweiler, W. H., chemical engineer, The United Gas Improvement Company, Philadelphia, Pa.

Grayson, T. J., associate professor, Wharton school of Commerce and Finance, University of Pennsylvania.

Griswold, R. G., chief technologist, Henry L. Doherty and Co., New York, N. Y.

Hepburn, W. M., vice-president, Surface Combustion Co., Toledo, Ohio.

King, A. G., service engineer, American Gas Association, New York, N. Y.

Kreisinger, Henry, research engineer, Combustion Engineering Corporation, New York, N. Y.

Loebell, H. O., vice-president and gen. mgr., Combustion Utilities Corporation, New York, N. Y.

Porter, H. C., consulting chemist, Philadelphia, Pa.

Schlegel, C. A., sales engr., The United Gas Improvement Co., Philadelphia, Pa.

Sellman, N. T., asst. to v.-p., commercial relations and asst. sec., Consolidated Gas Company, New York, N. Y.

Sperr, F. W., Jr., director of research, The Koppers Co., Laboratories, Pittsburgh, Pa.

Steere, F. W., vice-president, Sement-Solvay Engineering Corp., New York, N. Y.

Tucker, E. F., safety inspector, The United Gas Improvement Co., Philadelphia, Pa.

Weber, F. C., asst. v.-p., The Brooklyn Union Gas Co., Brooklyn, N. Y.

Economics of Blue Star

(Continued from page 394)

Your Committee further recommends that due consideration, by all concerned, be given to ways and means of establishing uniformity in the interpretation and exploitation of Laboratory approval and the mark of it in advertising or otherwise.

One suggestion is that manufacturers be asked to agree, when applying to the Laboratory for tests of their appliances, that they will exploit the Seal and its significance, only according to a fixed formula. The formula might be, it is suggested, a representation of the Seal, accompanied by some such legend as this:

"The guaranty of compliance with basic national standards of safety—American Gas Association, Inc."

Collateral suggestions, appropriate for consideration with the foregoing, are these: That the feasibility of adding the above legend to the Seal be studied, with a view of making its significance more clearly self-interpretative and definite, and that the practicability of designating the Seal as Laboratory Seal instead of Blue Star Seal be considered, and that the desirability of definitely relocating the Seal on the Appliance be also considered.

These conclusions and recommendations are submitted with confidence that sincere cooperation by manufacturers and gas companies in putting them into effect will produce results completely satisfactory to the entire gas industry.

PUBLICITY AND ADVERTISING SECTION

E. FRANK GARDINER, Chairman JAMES M. BENNETT, Vice-Chairman
CHARLES W. PERSON, Secretary

P. U. A. A. Meets at Detroit, July 9-10

Department of International Advertising Association Plans Valuable Two-Day Meeting

THE annual convention of the Public Utilities Advertising Association will be held at Detroit, Mich., July 9 and 10. This meeting will be held in conjunction with the annual convention and exhibition of the International Advertising Association, of which the P. U. A. A. is a departmental.

D. M. Mackie

P. H. Gadsden

P. H. Gadsden, vice-president, The United Gas Improvement Co., and vice-chairman of the Joint Committee of National Utility Associations, will address the general sessions of the International Advertising Association convention on July 9. His subject will be, "Great Industries Which Advertising Has Built."

A feature of the P. U. A. A. meeting will be the award of prizes to winners of the Better Copy Contest held during the past year. These awards will be made by officials of the national utility associations which sponsored the contest.

At the expressed wish of the members of the Association, the biggest part of the program is directed to discussion of specific problems instead of formal papers. The practical side of business problems will be discussed in open meeting.

The P. U. A. A. program will be as follows:

Monday, July 9, 2:00 P.M.

Presiding, B. J. Mullaney, vice-president, The Peoples Gas Light and Coke Co., Chicago, Ill.

Welcome—A. C. Marshall, vice-president and general manager, Detroit Edison Co.

President's Report—D. M. Mackie, President, P. U. A. A.

Treasurer's Report—C. W. Person, treasurer, P. U. A. A.

Budgeting and Accounting for Advertising Expenditures—Discussion led by L. D. Gibbs, Edison Electric Illuminating Co., Boston, Mass.; T. P. Pfeiffer, Byllesby Engineering and Management Corp., Chicago, Ill.; J. C. Costello, Tennessee Electric Power Co., Chattanooga, Tenn.

Reactions from the Broadcasting Field—F. A. Arnold, director of development, National Broadcasting Co., New York, N. Y.

Direct Mail Opportunities for Public Utilities—Homer J. Buckley, Buckley-Dement Co., Chicago, Ill.

Advertising Approach to Gas House Heating—Discussion led by Kenneth Magers, Union Gas and Electric Co., Cincinnati, Ohio; Henry Obermeyer, Consolidated Gas Co. of New York, N. Y.; John F. Weedon, The Peoples Gas Light and Coke Co., Chicago, Ill.

Are Advertising Costs in Line?—Discussion led by E. Frank Gardiner, Midland Utilities Co., Chicago, Ill.; L. K. Starr, Georgia Railway and Power Co., Atlanta, Ga.; T. H. Kettle, Northern States Power Co., Minneapolis, Minn.

Tuesday, July 10, 2:00 P.M.

Presiding, Wm. H. Hodge, vice-president, Byllesby Engineering and Management Corp., Chicago, Ill.

Contact with Stockholders—Wm. H. Hodge, chairman, Committee on Contact with Stockholders.

How Shall We Advertise Our Merchandise?—Discussion led by Clara H. Zillessen, Philadelphia Electric Co., Philadelphia, Pa.; Dorothy Button Fisher, Byllesby Engineering and Management Corp., Chicago, Ill.; Dor-

othy Dignam, McJunkin Advertising Co., Chicago, Ill.; Maurice Jacobs, Nebraska Power Co., Omaha, Neb.

Report of Better Copy Committee—I. M. Tuteur, vice-president, McJunkin Advertising Co., Chicago, Ill.

Awards to Winners of National Better Copy Contest—Introduction by President Mackie. Presentation for Electric Division, Gas Division, and Transportation Division.

Publicity Practices—Symposium.

New Ideas in Bus and Railway Advertising—Discussion led by Thomas Stanion, St. Louis Public Service Co., St. Louis, Mo.; Maxwell Bensen, Nashville Railway and Light Co., Nashville, Tenn.; W. H. Boyce, Pittsburgh Railroad Co., Pittsburgh, Pa.

Report—Nominating Committee.

Report—Resolutions Committee.

Election of officers.

Baking Journal Has Article on Gas Research

IN a recent issue of the *Journal* of the American Institute of Baking, an article by E. G. de Coriolis, research engineer of the Surface Combustion Co., Toledo, Ohio, tells of the research on gas-fired ovens which is being conducted at the Institute by the American Gas Association.

The following is an abstract of Mr. de Coriolis' article:

"Our question, 'what is bread?' must be answered in all of its fundamentals, not the least of which are those reactions, physical and chemical, which take place in the process of transforming the raw dough material after it enters the oven and from which it issues as the finished product, bread.

"A tremendous amount of work has been done in studying the ingredients entering into the dough formula. A good deal of ground yet remains to be covered in this particular field. But in one important feature the field is as yet almost virgin. We refer specifically to that of heat application. Where there is no heat, there can be no bread.

"With keen foresight the officers of the American Institute of Baking realized that there lay open for research a problem which required for solution the best specialized knowledge available. At this juncture the American Gas Association, as part of its program for industrial research, offered to provide the organization capable of supplying this specialized knowledge. From this has emerged a cooperative program which bids fair to result in enlightenment to both these great national agencies.

"At the Institute's laboratories in Chicago have been installed ovens of various types and work is now well under way. This work is under the joint direction of Dr. C. B. Morrison, of the Institute, and the Surface Combustion Company, acting for the American Gas Association.

"The questions being investigated all have a very direct bearing on the every-day business of the modern bakery. What is the best method of baking bread? Should the heat be applied directly or indirectly? What should be the moisture content of bread after it is baked? When is bread actually baked? What is the effect of air currents on the dough while baking? What is the rate of heat penetration into the dough? These questions might be multiplied almost indefinitely.

"A word here as to the activities of the American Gas Association might be of interest to the baking industry. For years gas has been used for baking, as well as for a great variety of industrial operations, and its increased use during the past twenty years has been of tremendous proportions. The gas industry, however, realized that in order to serve best its numerous customers new methods must be developed to meet their increasingly exacting needs.

"Gas as such is of use to no one. Its utility is in performing a heating operation through a piece of equipment best fitted to the needs of the particular industry to which it is applied. And how can this be brought about except by first studying these requirements and then in the light of the knowledge thus gained designing the equipment that best fulfills the needed function?

"It is for this purpose of solving such problems that the American Gas Association has undertaken an extensive program of industrial research and one of the first questions to be studied was that of heat application in the baking industry.

"It is only by answering such questions that progress can be made. There must be an oven to bake bread. What is the best equipment and the best process by which the modern bakery can produce most economically the best product in demand by its customers?"

Wanted

WANTED by a prominent library a copy of each of the following: A. G. A. Information Service—Nos. 1, 2, 6, 17, 18, 19, and 76. It is desirable that a complete file of the Information Service be on file in this library. If any member has copies he desires to donate, please advise K. R. Boyes, secretary, American Gas Association, 420 Lexington Avenue, New York, N. Y.

MANUFACTURERS SECTION

H. LEIGH WHITELAW, Chairman J. A. FRY, Vice-Chairman
C. W. BERGHORN, Secretary

Annual Exhibition Will Be World's Largest

Exhibit of Appliances and Equipment at Atlantic City Convention in October Will Make History

THE world's largest exhibition of gas appliances and equipment will be held this year on the Million Dollar Pier from October 8 to 12, when the American Gas Association meets for its tenth annual convention. Already more than 75 per cent of the exhibit space has been allotted, and additional requests are reaching Headquarters in every mail.

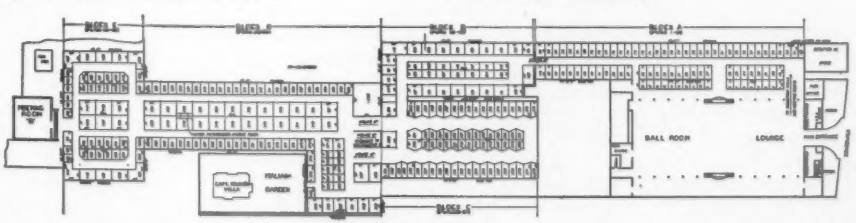
The space allotted to date, as of June 20, is equivalent to the total amount of space used for the 1926 exhibition. The 1926 exhibition was the largest up to that time.

Manufacturers are urged to make their applications for space at the earliest possible moment. No guarantee can be made for tardy applicants.

As of June 20th, the following manufacturer members of the A. G. A. have reserved space:

A-B Stove Company
Abendroth Bros.
Alpha-Lux Company, Inc.
American Aluminum Ware Co.
American Cast Iron Pipe Company
American Gas Furnace Company
American Gas Journal
American Gas Products Corp.
American Meter Company
American Stove Co.
Apex Electrical Mfg. Company
Arca Regulators, Inc.
Bailey Meter Company
Barber-Greene Company
Bartlett Hayward Company
C. O. Bartlett & Snow Company
Bernitz Furnace Appliance Company
B-Line Boiler Company
G. S. Blodgett Company, Inc.
Boone County Coal Corp.
Bridge & Beach Mfg. Co.
Brinkvalve Corp.
Bristol Company
Bryant Heater & Manufacturing Company
Bullard-Davis, Inc.
Burroughs Adding Machine Company
A. M. Byers Co.

Caloric Gas Stove Works
Carborundum Company
Carrier Engineering Corp.
Chambers Manufacturing Company
Chaplin-Fulton Mfg. Company
Chapman Valve Manufacturing Co.
Chicago Bridge & Iron Works
Geo. M. Clark & Company Div.
Claus Mfg. Co.
Cleanliness Institute
Cleveland Gas Burner & Appliance Company
Cleveland Gas Meter Co.
Cleveland Heater Company
Cleveland Trencher Co.
James B. Clow & Sons
Columbus Heating & Ventilating Company
Connelly Iron Sponge & Governor Company
Connersville Blower Company
Consumers Construction Company
Cribben & Sexton Company
Cruse-Kemper Company



The layout of the exhibition at the 1928 A. G. A. convention at Atlantic City, N. J., October 8 to 12

Cutler-Hammer Manufacturing Company

Dangler Stove Company, Div.
Dearborn Chemical Company
Detroit-Michigan Stove Company (Jewel Div.)
Direct Action Stove Company
Drake Non-Clinkering Furnace Block Co.
S. R. Dresser Mfg. Company
Dun-Rite Clock Device Company

Eclipse Fuel Engineering Company
Economy Governor Co.
Electric Indicator Corp.
Electrolux Servel Corp.
Ellis Adding Typewriter Company
Ensign-Reynolds Mfg. Co.
Eriez Stove & Manufacturing Company
Estate Stove Company

Favorite Stove & Range Co.
Fisher Governor Company
Floyd-Wells Company
Foxboro Co.

Gas Machinery Company
Gas Purifying Materials Company, Inc.
General Gas Light Co.
General Iron Works Company
General Office Equipment Corp.
  Elliott-Fisher Div.
  Sundstrand Div.
Giant Manufacturing Company
Glenwood Range Company
J. H. Grayson Manufacturing Company
John J. Griffin & Company
Groble Gas Regulator Company
Guardian Gas Appliance Company

Helme & McIlhenny
Hoffman Heater Company
Hoffman Specialty Co., Inc.
Home Incinerator Company
Homestead Heater Company
Hotstream Heater Company
Humphrey Company
Hurley Machine Company

Improved Equipment Company
International Business Machines Corp.
  Dayton Scale Co., Div.
  International Time Recording Co. Div.
  Tabulating Machine Co. Div.
International Combustion Engineering Corp.
  Combustion Engineering Corp.
  Dry Quenching Equipment Corp.
  International Coal Carboniaztion Co.
  F. J. Lewis Mfg. Co.
Ironton Stove & Manufacturing Company
Isbell-Porter Company

Johns-Manville Corp.
Johnson Gas Appliance Co.

Kee Lox Manufacturing Company
Kernit Incinerator Company
Klimatic Clothes Dryer Corp.
Kompak Company
Koppers Construction Company

Lambert Meter Company
W. E. Lamneck Co.
Lattimer-Stevens Company
P. M. Lattner Manufacturing Company
E. J. Lavino & Company
Lawson Mfg. Co.
Linde Air Products Company
Lovekin Water Heater Company

Majestic Manufacturing Company
Maryland Meter Works
D. McDonald & Company
McWane Cast Iron Pipe Company
Mears-Kane-Ofeldt, Inc.
Metric Metal Works
Merco Nordstrom Valve Company, Inc.
Michigan Stove Company
Mid-West Incinerator Corp.
Milwaukee Gas Specialty Company
Mine Safety Appliances Company
Minneapolis-Honeywell Regulator Company
Moore Bros. Company
Mulcare Engineering Co.
Mueller Company
L. J. Mueller Furnace Company

National Cash Register Company
National Lead Co.
National Refrigerating Company
National Tube Company
New Process Stove Company, Div.

Ohio Foundry & Manufacturing Company

Parsons Co.
Patrol Valve Company
Peerless Heater Company
Peninsular Stove Company
Perfection Diaphragm Company
Permutit Company
Pittsburg Water Heater Company
Pittsburgh Equitable Meter Company
Porcelain Enamel & Manufacturing Company
Proudfit Loose Leaf Company
Public Service Electric and Gas Co.
Pyrometer Instrument Co.

Quick Meal Stove Company, Div.

Reliable Stove Company, Div.
Remington Rand, Inc.
  Baker Vawter Div.
  Dalton Adding Machine Div.
  Kalamazoo Loose Leaf Binder Div.
  Library Bureau Div.
  Powers Accounting Machine Div.

Rand Kardex Div.
Remington Typewriter Div.
Safe Cabinet Div.
Reynolds Gas Regulator Company
Richmond Radiator Co.
Robins Conveying Belt Co.
Robbins Publishing Company
Roberts Brass Manufacturing Company
Roberts Gas Burner Corporation
Roberts & Mander Stove Company
Robertshaw Thermostat Company
P. H. & F. M. Roots Company
Geo. D. Roper Corporation
Ruud Manufacturing Company

Safety Gas Lighter Company
Safety Gas Main Stopper Company
Sands Manufacturing Company
Scientific Heater Company
Semet-Solvay Engineering Corp.
Sherwin Williams Company
J. B. Slattery & Bro. Inc.
A. P. Smith Manufacturing Company
Spencer Thermostat Company
Sprague Meter Company
Stacey Bros. Gas Construction Co.
Stacey Manufacturing Company
Standard Gas Equipment Company
Acorn Div.
Oriole Div.
Triplex Div.
Vulcan Div.
Stationers Loose Leaf Company
Sterling Range & Furnace Corp.
B. F. Sturtevant Company
Superior Manufacturing Company
Superior Meter Company
Surface Combustion Company

Tappan Stove Company
Thatcher Company
Time-O-Stat Corporation
Tinnerman Stove & Range Company
Titeflex Metal Hose Company
Nathaniel Tufts Meter Works
W. S. Tyler Company

United Engineers & Constructors, Inc.
(U. G. I.)
U. S. Cast Iron Pipe & Foundry Company
Utilities Publication Company

Victaulic Company of America

Wailes Dove-Hermiston Corp.
Walker Pratt Manufacturing Company
Welsbach Company
Western Gas Construction Company
West Gas Improvement Company
Wilcolator Company
Wilder Metal Company

Cover page of the Prospectus for the 1928 A. G. A. exhibition

W-K-M Company
Wise Furnace Company
R. D. Wood & Company

Youngstown Pressed Steel Company

GAS LABORATORY FOR PUBLIC SERVICE

THAT standards of public service may be elevated, and engineering and scientific research advanced is what is hoped may result from the new testing laboratory of the American Gas Association, now under construction at Cleveland, Ohio.

More than 70,000,000 people in America use gas and are dependent on it to some extent. The gas industry has performed a splendid public service in coordinating its activities for the benefit of the users of gas.

Gas in the past few years has steadily increased in importance; new uses for it have been found with amazing rapidity. Building the new testing laboratory will do much toward making it a still greater industrial giant, and still futher improve and broaden its field of use. Possibly no one has sufficient imagination to forecast accurately what gas will accomplish in the next century.—From the Millville, N. J., Republican.

Cooperative Efforts with House Heating Data

A. G. A., A. S. H. V. E. and H. P. C. N. A. Agree to Adopt Uniform Standards for Heat Loss Calculations

By C. G. SEGELER
Industrial Editor, American Gas Association

ONE of the details of the house heating business which had proved annoying was that the practices of the Heating and Ventilating Engineers, the Gas Company Engineers and the Heating and Piping Contractors were just different enough that when a building heating system was to be designed each of the three groups would secure a different answer by the use of their respective data.

Efforts have now been made, which appear to be going forward to a successful conclusion, to have the data of all three organizations in conformity. This important step forward will mark the beginning of even closer cooperative efforts between the American Gas Association, The American Society of Heating and Ventilating Engineers, and the Heating and Piping Contractors National Association.

Two meetings have been held of a joint committee of these three organizations to standardize data. The last meeting was held at Philadelphia in conjunction with the annual convention of the Heating and Piping Contractors National Association, and consisted of the Standardization Committee of that organization headed by Mr. Franklin, Perry West, A. V. Hutchinson, Mr. Houghten of the A.S.H.V.E.; H. Leigh Whitelaw and the writer of the American Gas Association.

A number of tentative agreements were made covering heat transfer coefficients, average size of window crack, effect of the sun, and the use of exposure factors. The material was referred for further study to the respective organizations, and it is hoped that it will not be long before complete agreement on all the debatable points will be secured.

Early Cartoonists Pictured the Smoke Enveloped City

Courtesy New York Times

GAS and its uses were meat for the cartoonist of the early nineteenth century, according to a recent article in the New York Times Magazine by Foster Ware, entitled "Cartoonists as Prophets of Invention."

As gas came into wider use, the cartoonist sometimes coupled uncanny prophecy with his pen-and-ink jests. At least one comic artist of those dim days must be credited with having forseen the modern smoke nuisance. He drew a fanciful sketch of a group of City Fathers studying a model of a town with a new gas factory in its midst.

"The chimney of the miniature factory," Mr. Ware writes, "is shown towering above the church spires, and from it pours a cloud of jet-black smoke. An enthusiastic demonstrator, doubtless the precursor of the modern high-pressure salesman, is shown holding the model town in his hands and breathing heavily to keep the smoke from enshrouding the theoretical inhabitants.

"Asked by an incredulous City Father how this feat might be accomplished on a large scale, the demonstrator replies that the city of the future must be built on a turnstile so that it will always face the wind and thus have its factory smoke streaming away from it.

"While it is not recorded that any City Fathers have yet adopted this ingenious idea, they have with few exceptions admitted the factory chimney, and no large city today can be said to be wholly free of the smoke nuisance. Perhaps the rotating town is yet to come. If it does come, the original idea will be found in an obscure cartoon published in 1849."

"Even so trivial a thing as the present-day gas-jet lighter which decorates every corner cigar store and around which centres the life of the fag-consumer trade was clearly foreseen by a cartoonist three-quarters of a century ago.

"Gas itself was a novelty when this unknown prophet conceived the grotesque notion of an English guardsman so tall that he could halt at one of the London's new gas lamp posts and get a light without stretching. He put his amusing conceit on paper; and reproduction of it today might well serve as working drawings of the first cigar lighter. Time has taken the laugh completely out of this once comic picture."

INDUSTRIAL GAS SECTION

F. C. MACKEY, Chairman J. P. LEINROTH, Vice-Chairman
C. W. BERGHORN, Secretary

Industrial Sales Course Will Be Held at New York University, September 5-19

THE fourth school for industrial gas salesmen offered by the Industrial Gas Section's Committee on Education of Gas Company Personnel will be held at the School of Commerce, New York University, New York, N. Y., September 5 to 19. The course will be under the general direction of Elmer E. Ferris, Professor of Salesmanship at the University.

J. P. Leinroth

Prof. E. E. Ferris

The course this year is by far the best that has ever been offered, according to J. P. Leinroth, chairman of the Committee on Education of Personnel.

"The introduction of university methods of instruction is an innovation, and will prove of great value to those who take the course," he says. "The School of Commerce and Finance of New York University ranks as one of the best, and a course carried on under the supervision of the University instructors will undoubtedly be of great assistance in preparing men to sell industrial gas.

"It has been pointed out by leaders of the industry that there is a distinct need for salesmen who are well versed in the principles of selling and factory economics. There is no question that an intensive course along these lines, conducted under the auspices of New York University, will prove of real value to the gas industry."

As outlined, the course will stress the sales and ecomonic phases of the industrial gas problem. Those in charge of the course feel that the technical work is being cared for adequately by the courses offered each year at the University of Illinois, M. I. T., etc.

The work at New York University will be carried on largely by members of the University faculty. University instruction methods will be used throughout, and definite assignments will be given as well as a grade at the end. Dormitory facilities will be offered at the University.

Among the subjects to be handled are the following:

Complete course in salesmanship, report writing, sales correspondence, essentials of advertising, three or four lectures on factory economics, including production systems, types of industrial organization, cost accounting, factory compensation systems, etc. Sessions on industrial heating requirements, market analysis, and gas in relation to competitive fuels will be carried on by leaders in the industrial gas field.

This sales course has been one of the most popular and valuable offered to men engaged in the industrial end of the business. This year by placing it under the actual direction of New York University it is hoped that the benefits will be of even more value than heretofore.

Futher announcements concerning registration, fees, the program, etc., will be given in the August issue of the MONTHLY.

The committee on Education of Personnel consists of:

J. P. Leinroth, chairman, Public Service

Electric & Gas Co., Newark, N. J.; A. J. Peters, vice-chairman, Consolidated Gas Co. of N. Y., New York, N. Y.; Karl Emmerling, East Ohio Gas Co., Cleveland, Ohio; A. D. Fredendall, The Peoples Gas Light and Coke Co., Chicago, Ill.; W. M. Hepburn, Surface Combustion Co., Toledo, O.; G. J. Kollock, Georgia Power Co., Atlanta, Ga.; J. J. Winn, Fall River Gas Co., Fall River, Mass.

Conner and Whitelaw Address H. & P. C. N. Ass'n

ON June 5, 6 and 7, the Heating and Piping Contractors' National Association held their annual convention in Philadelphia. The meetings were exceptionally well attended and many new proposals were accepted that promise to improve the service rendered by heating and piping contractors to the public. Most important has been furthering of the "certified heating" with its slogan—"certified heating assures comfort."

The American Gas Association was fortunate in having two papers presented by R. M. Conner, director of the American Gas Association Testing Laboratory, and H. Leigh Whitelaw, chairman of the Manufacturers' Section.

SUGGESTED PRACTICE FOR BOILER SELECTION

The Heating and Piping Contractors National Association was urged to adopt the following practice for selecting the proper size gas-fired boilers:

Where the installed radiation in equivalent square feet of direct cast-iron radiation is known, boiler shall be selected larger than this amount by the following percentages:

Radiation Installed	Per Cent Gas Boiler Capacity Required
100 sq.ft.	56%
500 sq.ft.	56
1000 sq.ft.	52.3
1500 sq.ft.	48.6
2000 sq.ft.	45.0
2500 sq.ft.	43.7
3000 sq.ft.	42.4
3500 sq.ft.	41.2
4000 sq.ft. or over	40.0

Where the total condensing load is known, that is, the sum of the equivalent installed direct cast-iron radiation plus the equivalent of the piping system in the same units, the boiler shall be selected to have 25 per cent larger capacity than the condensing load.

Mr. Conner in his paper told of the Laboratory program, and the acceptance of the American Gas Association's standards by the Canadian Gas Association. He also requested that the Heating and Piping Contractors try as far as possible to support the Laboratory by urging their clients to buy only such equipment as bears the Laboratory seal of approval.

Salesmen's Book by Prof. Ferris Enjoys Large Sale

THE book for industrial gas salesmen, entitled "The Industrial Gas Salesman," by Professor Elmer E. Ferris, is filling a long-felt need in the industry according to several executives interested in the industrial side of the gas business. While the book has been out less than a year, there is every indication that the first edition will be exhausted in the near future.

The book contains 120 pages of concise and effective sales and merchandising information for industrial salesmen. It gives real principles of salesmanship with direct application to industrial gas. Orders for this book which sells for $1.50 should be sent to A. G. A. Headquarters, 420 Lexington Avenue, New York, N. Y.

Wipe out the spoilage bugaboo
SPOILAGE costs mount rapidly with old-fashioned methods of heat-treating. Temperature control is difficult—fluctuations cannot be prevented. Your "reject" records tell the story.
Gas, on the other hand, insures perfect control. Its regulation requires no more than the turning of a valve or the automatic operation of a thermostat. Gas responds instantly, maintains a constant temperature. Uniformity of product is assured. Spoilage is minimized.
Your local gas company will tell you why industry has found over 21,000 profitable uses for gas; or write to
American Gas Association
420 Lexington Avenue, New York City
YOU CAN DO IT BETTER WITH GAS

Advertisement on industrial gas appearing in trade journals. Local companies may secure mats of this for newspaper use

COMMERCIAL SECTION
J. J. BURNS, Chairman G. M. KARSHNER, Vice-Chairman
J. W. WEST, Jr., Secretary

Announcement of Salesmen's Training Course Favorably Received

Member Companies Promise Full Cooperation on Field Survey

THAT the custom-built Salesmen's Training Course announced recently by the Association will meet a long felt need in the industry and prove of exceptional value is evident from the response of the industry at large. A great many letters have been received from executives commenting favorably on this course, which will start shortly after the October convention. The fullest cooperation has been offered by gas company and manufacturer members in the carrying out of the field survey on which the course will be based.

The following abstracts from a few of the letters received indicate the warm reception which this course will have:

"The announcement of a custom-built course in selling gas in our judgment is one of the most important activities that has been taken up by the Association in a long time."

"We are in hearty accord with the salesmen's training program of the Association and you may count on our organization to give every assistance possible."

"I am very glad to know that the Executive Board has authorized the preparation of the Salesmen's Training Course."

"There is undoubtedly great need for a salesmen's course such as contemplated."

"The development of a retail salesmen's training course for gas appliances as outlined is an idea in which we are very much in sympathy."

"We are highly in accord with this course and you can certainly count on our organization giving all the information possible in its preparation, including a representative enrollment from this company."

"We feel that this is a constructive movement."

"I think from what I know of other similar courses that this will be a very constructive addition to the service which the Association is rendering to the industry . . . . . it seems to me that the whole future of the industry lies to a great extent in the question of salesmanship, and anything that is done to improve the methods of marketing our product should be supported generously."

"When I saw the announcement of the course, I was delighted. It is certainly one thing that is very much needed. You may absolutely count on us in every way."

"We feel that an activity of this kind will be of considerable benefit to our sales efforts."

"I think this is one of the greatest things the Association has done for many years and that the results will be very gratifying."

"We are entirely in sympathy with your plan in this direction."

Further indications of the splendid support presaged for this course is the following resolution:

"BE IT RESOLVED, That the New England Association of Commercial Gas Managers be placed on record as heartily in accord with the plans of the American Gas Association for the preparation of a Salesmen's Training Course, and promises its full cooperation thereto."

The national field survey, described when the course was announced, is now well under way. The first part of the survey, where trained shoppers visit utility stores, will be completed within the next two or three weeks.

Experienced men and women trained to listen, to remember and record what they hear have been visiting member companies' stores as typical customers in every part of the country—New England, Atlantic States, South, Middle West, and Pacific Coast.

In gathering sales information, these shoppers have been asking gas salesmen many pertinent questions. They are observing how salesmen explain to them the construction, operation, and the

special features of every kind of appliance sold.

They are also raising objections so as to observe carefully how the salesmen meet these questions and how they overcome objections.

They note how salesmen approach and greet them; what tactics are used by salesmen in finding the customers' needs; how to explain the advantages of gas in meeting these needs; what advice and recommendations the salesmen give and how they give it; their interest, courtesy, and ability in meeting questions and objections; their skill in meeting the customers' needs so that appliances will not merely be sold but will continue to be used.

After each interview the shopper makes out a verbatim report of everything said and done. Many of these interviews have already been made and as soon as this part of the survey is completed, all reports will be analyzed and classified. All retail selling information and actual methods employed will be found in these interviews, and from them will be extracted the *best* selling methods, the meatiest information, and the most usable selling points. For the first time in the history of the gas industry this information will be made available through the course.

The second and third divisions of the field survey are now under way. They likewise will yield valuable information which will be incorporated in the course.

Announce Second Course in Gas Equipment at Columbia University

THE second summer course in gas equipment to be held at Teachers College, Columbia University, New York, N. Y., cooperating with the American Gas Association, will be held from July 9 to 27. The course this year will be similar to that offered last year except it will be somewhat broadened to include women in the industry who are engaged in selling appliances.

The course consists of practical laboratory and lecture work dealing with every phase of the use of gas for domestic purposes, as well as manufacture and distribution. Dr. C. J. Lynde, head of the department of physics and household engineering of Teachers College, will direct the laboratory work.

As announced, Dr. Lynde will give a lecture and demonstration every morning on heat in its relation to gas and household appliances. This will be followed by laboratory testing of household gas appliances.

Afternoons will be devoted to lectures, demonstrations, and field trips. In addition, special lectures will be given by the following members of the Teachers College staff: Miss Bertha E. Shapleigh, Dr. Grace MacLeod, Miss Victoria Carlsson, and Mrs. Ruth R. Treganza.

Field trips will be made to *Good Housekeeping* Institute, several home service departments in New York and vicinity, and to the plant of the largest wholesale poultry and game market in New York City.

Lectures will also be given by prominent executives in the gas industry.

Those students who wish college credit must have college matriculation. They must register in person on July 3, 5, 6 or 7 and they must take an examination at the end of the course.

The fee for the course is $27. This includes registration and all laboratory fees.

Application for course should be made to: Office of Practical Arts, Teachers College, Columbia University, New York City, but do not send money. The number admitted to the course is limited and places will be reserved in order of application.

TECHNICAL SECTION
WALTER C. BECKJORD, Chairman HARRY E. BATES, Vice-Chairman
H. W. HARTMAN, Secretary

Physical Characteristics of Coke

By H. M. CHAPMAN
Troy, N. Y.

COKE is sometimes called "the thoroughbred fuel." This appellation justly derives from the fact that, like thoroughbred animals, it is a man-made creation, improving raw nature. It scientifically reconstructs a natural product in such wise as to bring its properties under control, and make them serve specified purposes, and meet predetermined tests.

Four of the physical properties of coke —size, strength, density, and armor plating—have been discussed in the past to a considerable extent. Very little, however, has been said about the most important physical characteristic, *uniformity*.

It may be propounded here that uniformity of quality is of greater value, even, than standard of quality. This follows from the fact that almost any process employing coke will suffer more from a maladjustment due to variation in performance from day to day than it will suffer from the use of an inferior coke, if only it be *reliably* inferior. A supplier of low-price coke, for instance, is not excused for furnishing a batch of better coke, on occasion, by the circumstance that he is giving the customer more than he has paid for. The customer is getting something less than he bargained for, namely a reliable performance, to the presumed character of which his processes are adjusted. Such misbranding does not have to be deliberate and intentional to be unethical. It may be due merely to taking too much for granted and assuming that the factors of production have remained constant, when they have as a matter of fact changed. So far as the customer is concerned, the result is still misrepresentation.

Besides the four properties above mentioned the product may vary physically according to the coals used, or to the way the coals are mixed, that is, the percentage of each, or to the degree to which the coals are pulverized. A change in any one of these three conditions will usually give coke that is not uniform when one day's run is compared with another. The oven wall temperatures have a great effect on the uniformity of the coke, and for best results the temperatures should be so regulated that the coal will be evenly coked throughout the entire oven. Irregular heating causes some sections to be overcoked, other sections will be undercoked, and still another section correctly coked. Under these conditions part of the coke is dense and hard, some of which is armor plated, while part is soft, porous and of a decidedly different weight. When such coke is unloaded at the point of consumption, the lighter pieces will roll to the edge of the pile, while the dense pieces will remain in the center. When this coke is used, the lighter coke will be taken first, after which there is a sharp change to the dense coke lying in the center of the pile. If this coke is used for domestic purposes, and the furnace has been adjusted to burn the lightweight coke, a different method of handling is required. The drafts having been set to burn the porous coke, the fire goes out when the dense coke is used, because there is a lack of air to carry on combustion. When the drafts have been set for dense coke, the unexpected change to more porous quality causes the fire to burn too freely.

Presented at Production Conference, Rochester, N. Y.

The method of quenching coke should be so standardized that there is very little variation in moisture content. The absorption of water by pieces of coke will depend upon their porosity and the length of time they are in contact with the water. In order to get uniformity in the water content of the different pieces, it is essential to produce uniform coke by uniform heating as above outlined. Where coke is sold by weight it is obvious that when the moisture content is high the consumer does not get full value for the money he spends on fuel. In order to maintain a high standard it is necessary that the water content should be as uniformly low as is possible for efficient operation. This is also necessary in order to prevent serious agitation for a law regulating the water content of coke, and too much stress cannot be put on the quenching of coke.

The last physical property of uniformity is proper classification by sizes through adequate screening. In all sizes of coke there should be no perceptible amount of breeze. The presence of breeze in any size of coke creates a condition which will give trouble wherever the coke is used and dirty coke has caused more complaints than all other things put together. Likewise nut coke must not contain any stove and very little pea, and the same relation is true of the other sizes. With proper screening coke can be adequately sized or classified providing it is uniformly coked by uniform heating. Where the coking has not been uniform the undercoked pieces which are soft keep on disintegrating whenever handled, while the overcoked pieces break easily, due to their extreme brittleness. The result is the consumer receives much fine coke and breeze, from which he gets very little value as fuel.

In oven operation, common prudence requires due care for temperature control. It takes less trouble in the long run to be watchful than to be slipshod. Any lack of uniformity in temperatures will result in cold spots, possibly stuck ovens or reduced gas yields. The watchfulness of those set to guard depends a good deal upon the human factor and is really an aspect of the personnel problem.

It is a curious fact that more care is almost always expended upon keeping a uniform flow of gas than on producing a uniform coke. Automatic regulators are installed at the ovens and also on the exhausters, so that the pressure of gas in the collecting mains will be as constant as possible and also in order that the gas flow will not travel in waves. Coke, the major product, upon which the success of the whole operation depends, is often handled without due care as to uniformity. Often, indeed, the whole control breaks down in the simplest aspect,—the mechanical handling after the product has been created. A thoroughbred product is given a truck horse care and what has been built by science is destroyed by lack of common sense.

Aspects of Merchandising

(Continued from page 420)

and its products. With this state of mind existing it is easier to reflect this belief to the public. In other words, the company cannot hope to gain the full confidence of the community unless the employees themselves are sold to the company's aims.

The responsibility for sales activities in an operating district should be placed upon an appliance manager reporting to the manager of the district. This man must be particularly well qualified not only to handle the sales personnel, but to develop business in a general way with other agencies in the community. Above all, he must fully appreciate the obligations of a public utility to its customers.

A company, having several districts, should have a general office staff, the function of which is to define policies, set up standards and lend help to the district organizations while the latter carry such plans to a successful conclusion. There must be close cooperation between the districts and the general staff.

[TO BE CONTINUED]

Associations Affiliated with A. G. A.

Canadian Gas Association
Pres.—*P. V. Byrnes, United Gas & Fuel Co., Hamilton, Ont.
Sec.-Tr.—G. W. Allen, 7 Astley Avenue, Toronto.
Conv., 1929.

Empire State Gas and Electric Association
Pres.—H. O. Palmer, Empire Gas & Electric Co., Geneva, N. Y.
Chairman Gas Section—H. E. Merrill, Republic Light & Power Co., Tonawanda, N. Y.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.
Conv., Upper Saranac, N. Y., Oct. 1 and 2, 1928.

Illinois Gas Association
Pres.—J. A. Strawn, Central Light Co., Peoria, Ill.
Sec.-Tr.—R. V. Prather, 305 Illinois Mine Workers Bldg., Springfield, Ill.
Conv., 1929.

Indiana Gas Association
Pres.—T. J. Kelley, Northern Indiana Public Service Co., Fort Wayne, Ind.
Sec.-Tr.—F. B. Tracy, Central Indiana Gas Co., Muncie, Ind.
Conv., 1929.

Michigan Gas Association
Pres.—F. W. Steere, Semet-Solvay Co., New York, N. Y.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.
Conv., Grand Hotel, Mackinac Island, Mich., July 5 to 7, 1928.

Mid West Gas Association
Pres.—H. R. Sterrett, Des Moines Gas Co., Des Moines, Iowa.
Sec.-Tr.—A. W. Schmidt, Des Moines Gas Co., Des Moines, Iowa.
Conv., 1929.

Missouri Association of Public Utilities
Pres.—A. E. Reynolds, Springfield Gas & Electric Co., Springfield, Mo.
Sec.-Tr.—F. D. Beardslee, 315 N. 12th St., St. Louis, Mo.
Conv., 1929.

New England Gas Association
Pres.—G. W. Stiles, Portland Gas Light Co., Portland, Me.
Exec. Sec.—C. D. Williams, 41 Mount Vernon St., Boston, Mass.
Chairman Operating Div.—H. Vittinghoff, Stone & Webster, Inc., Boston, Mass.
Secretary Operating Div.—H. G. Taylor, Lawrence Gas & Electric Co., Lawrence, Mass.
Gov. Sales Div.—M. B. Webber, Marlboro-Hudson Gas Co., Boston, Mass.
Sec.-Tr.—Sales Div.—J. H. Sumner, 719 Massachusetts Ave., Cambridge, Mass.
Pres. Industrial Div.—E. W. Berchtold, Boston Con. Gas Co., Boston, Mass.
Sec.-Tr. Industrial Div.—L. E. Wagner, Providence Gas Co., Providence, R. I.
Chairman Acctg. Div.—W. A. Doering, Boston Con. Gas Co., Boston, Mass.
Sec.-Treas. Acctg. Div.—Otto Price, Boston Con. Gas Co., Boston, Mass.
Conv., 1929.

New Jersey Gas Association
Pres.—H. A. Stockton, County Gas Co., Atlantic Highlands, N. J.
Sec.-Tr.—Louis Stoecker, Public Service Electric & Gas Co., Newark, N. J.
Conv., 1929.

Ohio Gas and Oil Men's Association
Pres.—J. J. McMahon, The East Ohio Gas Co., Cleveland, O.
Sec.-Treas.—Wm. H. Thompson, 811 First National Bank Bldg., Columbus, O.
Conv., 1928.

Oklahoma Utilities Association
Pres.—L. W. Scherer, United Telephone Corp., Yale, Okla.
Mgr.—E. F. McKay, 1030 Petroleum Bldg., Oklahoma City, Okla.
Conv., 1929.

Pacific Coast Gas Association
Pres.—L. M. Klauber, San Diego Consolidated Gas & Electric Co., San Diego, Calif.
Exec. Sec.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.
Conv., Coronado, Calif., Sept. 17-21, 1928.

Pennsylvania Gas Association
Pres.—Mark Pendleton, Pennsylvania Gas & Electric Co., York, Pa.
Sec.-Tr.—Geo. L. Cullen, Harrisburg Gas Co., Harrisburg, Pa.
Conv., 1929.

Pennsylvania Natural Gas Men's Association
Pres.—Geo. Wittmer, Jr., Wittmer Oil & Gas Properties, Park Bldg., Pittsburgh, Pa.
Sec.-Treas.—E. J. Stephany, Equitable Gas Co., Pittsburgh, Pa.
Conv., 1929.

Southern Gas Association
Pres.—Roy A. Zeigler, Jacksonville Gas Co., Jacksonville, Fla.
Sec.-Tr.—J. P. Connolly, 141 Meeting St., Charleston, S. C.
Conv., 1929.

Southwestern Public Service Association
Pres.—W. H. Burke, Stone & Webster, Inc., Houston, Texas.
Chairman Gas Section—R. A. McNees, San Antonio Public Service Co., San Antonio, Texas.
Sec.—E. N. Willis, 403 Slaughter Bldg., Dallas, Texas.
Conv., 1929.

The Public Utilities Association of Virginia
Pres.—J. W. Hancock, Roanoke, Va.
Sec.—A. B. Tunis, 301 East Grace St., Richmond, Va.
Conv.

Wisconsin Utilities Association
Pres.—C. R. Phenicie, Wisconsin Public Service Corp., Green Bay, Wis.
Exec.-Sec.—J. N. Cadby, 432 Broadway, Milwaukee, Wis.
Conv., 1929.

*Deceased.

Tenth Annual Convention of the American Gas Association
Atlantic City, N. J. October 8-12, 1928

Employment Bureau

(Address All Communications to Key Number)

SERVICES REQUIRED

WANTED—Live wire organization preferably, or an established individual to represent manufacturer of a new type—nationally advertised water heater. Full cooperation and generous commissions paid. Water heater is now completed and selling fast. Address A. G. A.
Key No. 0113.

SERVICES WANTED by established manufacturers of Industrial Gas Appliances Resident representatives for new equipment highly interesting to all Industrial Gas Engineers. Address, A. G. A.
Key No. 0116.

GAS ENGINEER: Company manufacturing gas plant apparatus has an opening for a gas engineer. Must be familiar with water gas plant operation and apparatus. About 30 to 35 years of age. Give detailed experience and salary expected in applying. Address A. G. A.
Key No. 0117.

WANTED—Gas Sales Engineer experienced in application of gas, particularly in industrial processes. Address American Gas Association stating age, experience and salary desired.
Key No. 0118.

CONSTRUCTION ENGINEER—who has had experience in gas mains work is required by a holding company for a building of a new plant in the South. All applicants are required to state full qualifications and salary requirements in first letter. Address A. G. A.
Key No. 0119.

WANTED—Superintendent experienced in design and production gas ranges and heaters for new company in Southwest. Also need sales manager. Can acquire financial interest but not essential. State fully experience, qualifications and expected salary. Box Address A. G. A.
Key No. 0120.

WANTED—By large producing coal and coke company, Combustion Engineer familiar with gas, by-product plant and boiler operation, to cooperate with Sales Department. Prefer man with experience in New England and Eastern Territories. State reference and detail experience. Address A. G. A.
Key No. 0121.

GAS SALES ENGINEER—Large Eastern Utility Company desires engineering graduate, preferably with experience in application of gas to industrial processes. Please state age, education, experience, and salary desired. Address A. G. A.
Key No. 0122.

SERVICES OFFERED

AGGRESSIVE MANAGER or General Superintendent, 25 years in the industry, familiar with all branches of operation and construction. Best of references. Available now. Address A. G. A.
Key No. 246.

ASSISTANT TO EXECUTIVE: Married, 37 years old, secretary to well-known executive in New England company wishes similar position in medium size company. Anywhere. Best of references. Reason for change, reorganization of management. Address A. G. A.
Key No. 247.

POSITION WANTED—Auditor or Office Manager, Middle West preferred. Sixteen years' experience in local and general offices; coal and water gas accounting; coke distribution; rate promotion; mechanical bookkeeping systems; all phases of commercial department, city and suburban territory. Married. Age 38. Excellent health and splendid personality. Address A. G. A.
Key No. 248

WANTED—Position as manager of small progressive gas company in a growing community by technical graduate, 36 years old. Married. Twelve years' experience including water gas plant construction and operation, High- and Low-Pressure Distribution, including Meters and Regulators. Special emphasis on Public Relations work. Address A. G. A.
Key No. 249.

GAS DISTRIBUTION FOREMAN desires to change his position. Experienced in laying mains and services on both high- and low-pressure, good man on governors, can weld pipe. Also considered a first-class fitter on automatic, storage, tank water heaters, house heating systems, and other appliances. Will start as fitter or welder if there is chance for advancement. Address A. G. A.
Key No. 250.

WANTED—Position as Manager by man thoroughly capable of handling all departments of a Gas property. Good record in Public Relations, has also operated Electric Light & Power Plant. Address A. G. A.
Key No. 255.

EXPERIENCED—"Employee and Public Relations Man." Well grounded in knowledge of public utility organization business. Deeply interested and specially experienced in all work pertaining to public and employee relations work. Capable of executive position of responsibility. Address A. G. A.
Key No. 256.

AGENT—A man of broad sales experience and acquaintance in the gas industry and other trade outlets of Southwest desires sales agency for line of gas equipment in Texas and adjoining territory. Address A. G. A.
Key No. 257.

AVAILABLE for Gas Company or Appliance Manufacturer. A man with wide experience in design, installation and utilization of domestic appliances. Address A. G. A.
Key No. 258.

TECHNICAL MAN now employed desires new location. 38 years of age. 16 years' experience in coal and water gas manufacture, sales and distribution; also one year's experience with a coal company sampling coal in mines, from cars and special research work. Address A. G. A.
Key No. 259.

STUDENT ENGINEER desires position with gas company where he can finish his course and with opportunity for advancement. Address A. G. A.
Key No. 260

EXPERIENCED industrial and domestic sales engineer wishes to connect with a company where qualification and responsibility is needed. Capable of taking charge where gas load building is required. 33 years of age. Well educated and of pleasing personality. Address A. G. A.
Key No. 261.

HOUSE HEATING MANAGER—Desires a change from present location. Thoroughly experienced in gas heating and also gas refrigeration. Technical graduate, 26 years old. Single. Available within reasonable length of time after notice is given to present employers. Address A. G. A.
Key No. 262.

SUPERINTENDENT with exceptional record for Improving Results; Plant, and Personnel, desires position either as Superintendent or Manager. Address A. G. A.
Key No. 264.

CHEMICAL ENGINEER—38 years of age—15 years' experience in water and Coal Gas Plant operation, construction, distribution, and By-Product Plant work, desires connection as Gas Engineer with a holding company, or large individual gas company. Address A. G. A.
Key No. 265.

WANTED—Position as manager of a small gas company or assistant superintendent of a larger company, by practical man, 36 years old. Married. 12 years' experience including water gas plant operator both high and low pressure, also all branches of distribution. Best of references. Address A. G. A.
Key No. 266.

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